

## PRELIMINARY DETERMINATION

PERMIT RENEWAL  
Alabama Power Company  
Post Office Box 2641  
Birmingham, Alabama 35291

Greene County Steam Plant Landfill  
Permit No. 32-02

xxxxxxx

Alabama Power Company has submitted to the Alabama Department of Environmental Management (ADEM) an application to continue to operate an industrial landfill known as the Greene County Steam Plant Landfill. The waste stream for the Greene County Steam Plant Landfill would remain non-hazardous construction and demolition waste such as waste building materials, masonry, wall board, roofing material, wood products, pipe, insulation and similar materials, rubbish such as paper products, cartons, cardboard, pallets, scrap metal, tires and furniture; asbestos containing material; and non-hazardous industrial wastes such as anion/cation resins and non-hazardous sandblast waste, spent desiccant, and off-specification anhydrous sodium carbonate (soda ash). The service area for the Greene County Steam Plant Landfill would remain the Greene County Steam Plant located in Forkland, Alabama. The maximum average daily volume of waste disposed at the Greene County Steam Plant Landfill would remain 5 cubic yards per day. All previous variances have been requested by the applicant and will be granted in the renewed permit.

The Greene County Steam Plant Landfill is described as being located in the West ½ of Section 22, Township 19 North, Range 3 East in Greene County, Alabama. The Greene County Steam Plant Landfill consists of 14.95 acres with all approved for disposal operations.

The Land Division has determined that the renewal of the permit meets the applicable requirements of ADEM's Administrative Code Division 13.

Technical Contact:  
John Sturdivant  
Solid Waste Engineering Section  
Land Division



# ***SOLID WASTE DISPOSAL FACILITY PERMIT***

**PERMITTEE:** Alabama Power Company

**FACILITY NAME:** Greene County Steam Plant Landfill

**FACILITY LOCATION:** West ½ of Section 22, Township 19 North, Range 3 East in Greene County, Alabama. The facility consists of 14.95 acres with all for disposal.

**PERMIT NUMBER:** 32-02

**PERMIT TYPE:** Industrial Landfill

**WASTE APPROVED FOR DISPOSAL:** Non-hazardous construction and demolition waste such as waste building materials, masonry, wall board, roofing material, wood products, pipe, insulation and similar materials, rubbish such as paper products, cartons, cardboard, pallets, scrap metal, tires and furniture; asbestos containing material; and non-hazardous industrial wastes such as anion/cation resins and non-hazardous sandblast waste, spent desiccant, and off-specification anhydrous sodium carbonate (soda ash).

**APPROVED WASTE VOLUME:** Maximum Daily Volume of 5 cubic yards per day

**APPROVED SERVICE AREA:** Greene County Steam Plant located in Forkland, Alabama.

In accordance with and subject to the provisions of the Alabama Solid Wastes and Recyclable Materials Management Act, as amended, Code of Alabama 1975, SS 22-27-1 to 22-27-27 ("SWRMMA"), the Alabama Environmental Management Act, as amended, Code of Alabama 1975, SS 22-22A-1 to 22-22A-15, and rules and regulations adopted thereunder, and subject further to the conditions set forth in this permit, the Permittee is hereby authorized to dispose of the above-described solid wastes at the above-described facility location.

**ISSUANCE DATE:** **XXXXX**

**EFFECTIVE DATE:** **XXXXX**

**EXPIRATION DATE:** **XXXXX**

**ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
SOLID WASTE PERMIT**

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Permittee: Alabama Power Company  
Post Office Box 2641  
Birmingham, Alabama 35291-0830

Landfill Name: Greene County Steam Plant Landfill

Landfill Location: Greene County Road 18  
Forkland, Alabama  
West ½ of Section 22, Township 19 North, Range 3 East  
Greene County

Permit Number: 32-02

Landfill Type: Industrial

Pursuant to the Solid Wastes & Recyclable Materials Management Act, Code of Alabama 1975, §§22-27-1, *et seq.*, as amended (the “Act”), and attendant regulations promulgated thereunder by the Alabama Department of Environmental Management (ADEM), this permit is issued Alabama Power Company (hereinafter called the Permittee), to operate a solid waste disposal facility, known as the Greene County Steam Plant Landfill.

The Permittee must comply with all terms and conditions of this permit. This permit consists of the conditions set forth herein (including those in any attachments), and the applicable regulations contained in 335-13-1 through 335-13-16 of the ADEM Administrative Code (hereinafter referred to as the "ADEM Admin. Code" or as “335-13”). Rules cited are set forth in this document for the purpose of Permittee reference. Any rule that is cited incorrectly in this document does not constitute grounds for noncompliance on the part of the Permittee. Applicable ADEM Admin. Codes are those that are in effect on the date of issuance of this permit or any revisions approved after permit issuance.

This permit is based on the information submitted to ADEM on April 30 2020, for permit renewal and is known as the Permit Application (hereby incorporated by reference and hereinafter referred to as the Application). Any inaccuracies found in this information could lead to the termination or modification of this permit and potential enforcement action. The Permittee must inform ADEM of any deviation from or changes in the information in the Application that would affect the Permittee's ability to comply with the applicable ADEM Admin. Code or permit conditions.

This permit is effective as of **xxxxxx**, and shall remain in effect until **xxxxxx**, unless suspended or revoked.

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Alabama Department of Environmental Management

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Date Signed

## SECTION I. STANDARD CONDITIONS.

- A. Effect of Permit. The Permittee is allowed to dispose of nonhazardous solid waste in accordance with the conditions of this permit and 335-13. Issuance of this permit does not convey property rights of any sort or any exclusive privilege, nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of state or local laws or regulations. Except for actions brought under the Act, compliance with the conditions of this permit shall be deemed to be compliance with applicable requirements in effect as of the date of issuance of this permit and any future revisions.
- B. Permit Actions. This permit may be suspended, revoked or modified for cause. The filing of a request for a permit modification or the notification of planned changes or anticipated noncompliance on the part of the Permittee, and the suspension or revocation does not stay the applicability or enforceability of any permit condition.
- C. Severability. The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.
- D. Definitions. For the purpose of this permit, terms used herein shall have the same meaning as those in 335-13, unless this permit specifically provides otherwise; where terms are not otherwise defined, the meaning associated with such terms shall be as defined by a standard dictionary reference or the generally accepted scientific or industrial meaning of the term.
1. "EPA" for purposes of this permit means the United States Environmental Protection Agency.
  2. "Permit Application" for the purposes of this permit, means all permit application forms, design plans, operational plans, closure plans, technical data, reports, specifications, plats, geological and hydrological reports, and other materials which are submitted to ADEM in pursuit of a solid waste disposal permit.
- E. Duties and Requirements.
1. Duty to Comply. The Permittee must comply with all conditions of this permit except to the extent and for the duration such noncompliance is authorized by a variance granted by ADEM. Any permit noncompliance, other than noncompliance authorized by a variance, constitutes a violation of the Act and is grounds for enforcement action, permit suspension, revocation, modification, and/or denial of a permit renewal application.
  2. Duty to Reapply. If the Permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the Permittee must apply for and obtain a new permit. The renewal application must be submitted to ADEM at least 180 days before this permit expires.
  3. Permit Expiration. This permit and all conditions therein will remain in effect beyond the permit's expiration date if the Permittee has submitted a timely, complete application as required by Section I.,E.,2., and, through no fault of the Permittee, ADEM has not made a final decision regarding the renewal application.
  4. Need to Halt or Reduce Activity Not A Defense. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the conditions of this permit.
  5. Duty to Mitigate. In the event of noncompliance with this permit, the Permittee shall take all reasonable steps to minimize releases to the environment, and shall carry out such measures as are reasonable to prevent significant adverse impacts on human health or the environment.

6. Proper Operation and Maintenance. The Permittee shall at all times properly operate and maintain all facilities and systems of control (and related appurtenances) that are installed or used by the Permittee to achieve compliance with the conditions of this permit.
7. Duty to Provide Information. If requested, the Permittee shall furnish to ADEM, within a reasonable time, any information that ADEM may reasonably need to determine whether cause exists for denying, suspending, revoking, or modifying this permit, or to determine compliance with this permit. If requested, the Permittee shall also furnish ADEM with copies of records kept as a requirement of this permit.
8. Inspection and Entry. Upon presentation of credentials and other documents as may be required by law, the Permittee shall allow the employees of ADEM or their authorized representative to:
  - a. Enter at reasonable times the Permittee's premises where the regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit.
  - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit.
  - c. Inspect, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit.
  - d. Sample or monitor, at reasonable times, any substances or parameters at any location for the purposes of assuring permit compliance or as otherwise authorized by the Act.
9. Monitoring, Corrective Actions, and Records.
  - a. Samples and measurements taken for the purpose of monitoring or corrective action shall be representative of the monitored activity. The methods used to obtain representative samples to be analyzed must be the appropriate method from 335-13-4 or the methods as specified in the Application attached hereto and incorporated by reference. Laboratory methods must be those specified in Standard Methods for the Examination of Water and Wastewater (American Public Health Association, latest edition), Methods for Chemical Analysis of Water and Wastes (EPA-600/4-79-020), Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (EPA Publication SW-846, latest edition), other appropriate EPA methods, or as specified in the Application. All field tests must be conducted using approved EPA test kits and procedures.
  - b. The Permittee shall retain records, at the location specified in Section I.,I., of all monitoring, or corrective action information, including all calibration and maintenance records, copies of all reports and records required by this permit, and records of all data used to complete the application for this permit for a period of at least three years from the date of the sample, measurement, report or record or for periods elsewhere specified in this permit. These periods may be extended by the request of ADEM at any time and are automatically extended during the course of any unresolved enforcement action regarding this facility.
  - c. Records of monitoring and corrective action information shall include.
    - i. The exact place, date, and time of sampling or measurement.
    - ii. The individual(s) and company who performed the sampling or measurements.
    - iii. The date(s) analyses were performed.
    - iv. The individual(s) and company who performed the analyses.
    - v. The analytical techniques or methods used.

- vi. The results of such analyses.
- d. The Permittee shall submit all monitoring and corrective action results at the interval specified elsewhere in this permit.
- 10. Reporting Planned Changes. The Permittee shall notify ADEM, in the form of a request for permit modification, at least 90 days prior to any change in the permitted service area, increase in the waste received, or change in the design or operating procedure as described in this permit, including any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.
- 11. Transfer of Permit. This permit may be transferred to a new owner or operator. All requests for transfer of permits shall be in writing and shall be submitted on forms provided by ADEM. Before transferring ownership or operation of the facility during its operating life, the Permittee shall notify the new owner or operator in writing of the requirements of this permit.
- 12. Certification of Construction. The Permittee may not commence disposal of waste in any new cell or phase until the Permittee has submitted to ADEM, by certified mail or hand delivery, a letter signed by both the Permittee and a professional engineer stating that the facility has been constructed in compliance with the permit. ADEM must inspect the constructed cells or phases before the owner or operator can commence waste disposal unless the Permittee is notified that ADEM will waive the inspection.
- 13. Compliance Schedules. Reports of compliance or noncompliance with or any progress reports on interim and final requirements contained in any compliance schedule required and approved by ADEM shall be submitted no later than 14 days following each schedule date.
- 14. Other Noncompliance. The Permittee shall report all instances of noncompliance with the permit at the time monitoring reports are submitted.
- 15. Other Information. If the Permittee becomes aware that information required by the Application was not submitted or was incorrect in the Application or in any report to ADEM, the Permittee shall promptly submit such facts or information. In addition, upon request, the Permittee shall furnish to ADEM, within a reasonable time, information related to compliance with the permit.
- F. Design and Operation of Facility. The Permittee shall maintain and operate the facility to minimize the possibility of a fire, explosion, or any unplanned sudden or nonsudden release of contaminants (including leachate and explosive gases) to air, soil, groundwater, or surface water, which could threaten human health or the environment.
- G. Inspection Requirements.
  - 1. The Permittee shall comply with all requirements of 335-13.
  - 2. The Permittee shall conduct random inspections of incoming loads.
  - 3. Records of all inspections shall be included in the operating record.
- H. Recordkeeping and Reporting.
  - 1. The Permittee shall maintain a written operating record at the location specified in Section I.I. The operating record shall include:
    - a. Documentation of inspection and maintenance activities.
    - b. Daily Volume reports.

- c. Personnel training documents and records.
  - d. Solid/Hazardous Waste Determination Forms for Industrial Wastes, and associated ADEM disposal approval correspondence for industrial waste and special waste.
  - e. Groundwater monitoring records if required.
  - f. Explosive gas monitoring records if required.
  - g. Surface water and leachate monitoring records.
  - h. Copies of this Permit and the Application.
  - i. Copies of all variances granted by ADEM, including copies of all approvals of special operating conditions.
2. Quarterly Volume Report. Beginning with the effective date of this permit, the Permittee shall submit, within thirty (30) days after the end of each calendar quarter, a report summarizing the daily waste receipts for the previous (just ended) quarter. Copies of the quarterly reports shall be maintained in the operating record.
3. Monitoring and Corrective Action Reports. The Permittee shall submit reports on all monitoring and corrective activities conducted pursuant to the requirements of this permit, including, but not limited to, groundwater, surface water, explosive gas and leachate monitoring. The groundwater monitoring shall be conducted in March and September of each year, or as directed by ADEM, and the reports shall be submitted at least semi-annually, or as directed by ADEM. The reports should contain all monitoring results and conclusions from samples and measurements conducted during the sampling period. Explosive gas monitoring must be submitted on a quarterly basis, and the reports should be submitted to ADEM and placed in the operating record within 30 days of the monitoring event. Copies of the groundwater and explosive gas monitoring reports shall be maintained in the operating record.
4. Availability, Retention, and Disposition of Records.
- a. All records, including plans, required under this permit or 335-13 must be furnished upon request, and made available at reasonable times for inspection by any officer, employee, or representative of ADEM.
  - b. All records, including plans, required under this permit or 335-13 shall be retained by the Permittee for a period of at least three years. The retention period for all records is extended automatically during the course of any unresolved enforcement action regarding the facility, or as requested by ADEM.
  - c. A copy of records of waste disposal locations and quantities must be submitted to ADEM and local land authority upon closure of the facility.
- I. Documents to be Maintained by the Permittee. The Permittee shall maintain, at the Alabama Power Company Greene County Steam Plant office located in Forkland, Alabama, the following documents and amendments, revisions and modifications to these documents until an engineer certifies closure of the permitted landfill.
- 1. Operating record.
  - 2. Closure Plan.

- J. Mailing Location. All reports, notifications, or other submissions which are required by this permit should be sent via signed mail (i.e. certified mail, express mail delivery service, etc.) or hand delivered to:
1. Mailing Address.  
Chief, Solid Waste Branch  
Alabama Department of Environmental Management  
P.O. Box 301463  
Montgomery, AL 36130-1463
  2. Physical Address.  
Chief, Solid Waste Branch  
Alabama Department of Environmental Management  
1400 Coliseum Blvd.  
Montgomery, Alabama 36110-2400
- K. Signatory Requirement. All applications, reports or information required by this permit, or otherwise submitted to ADEM, shall be signed and certified by the owner as follows:
1. If an individual, by the applicant.
  2. If a city, county, or other municipality or governmental entity, by the ranking elected official, or by a duly authorized representative of that person.
  3. If a corporation, organization, or other legal entity, by a principal executive officer, of at least the level of Vice President, or by a duly authorized representative of that person.
- L. Confidential Information. The Permittee may claim information submitted as confidential if the information is protected under Code of Alabama 1975 §§22-39-18, as amended.
- M. State Laws and Regulations. Nothing in this permit shall be construed to preclude the initiation of any legal action or to relieve the Permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation.

## SECTION II. GENERAL OPERATING CONDITIONS.

- A. Operation of Facility. The Permittee shall operate and maintain the disposal facility consistent with the Application, this permit, and 335-13.
- B. Open Burning. The Permittee shall not allow open burning without prior written approval from ADEM and other appropriate agencies. A burn request should be submitted in writing to ADEM outlining why that burn request should be granted. This request should include, but not be limited to, specifically what areas will be utilized, types of waste to be burned, the projected starting and completion dates for the project, and the projected days and hours of operation. The approval, if granted, shall be included in the operating record.
- C. Prevention of Unauthorized Disposal. The Permittee shall follow the approved procedures for the detecting and preventing the disposal of free liquids, regulated hazardous waste, PCB's, and medical waste at the facility.
- D. Unauthorized Discharge. The Permittee shall operate the disposal facility in such a manner that there will be no water pollution or unauthorized discharge. Any discharge from the disposal facility or practice thereof may require a National Pollutant Discharge Elimination System permit under the Alabama Water Pollution Control Act.
- E. Industrial Waste Disposal. The Permittee shall dispose of industrial waste as required by 335-13-4-.21(1)(c), and as specified in the Application.



- F. Boundary Markers. The Permittee shall ensure that the facility is identified with a sufficient number of permanent boundary markers that are at least visible from one marker to the next.

### SECTION III. SPECIFIC REQUIREMENTS FOR INDUSTRIAL WASTE LANDFILLS.

A. Waste Identification and Management.

1. Subject to the terms of this permit, the Permittee may accept for disposal the nonhazardous solid wastes listed in III.B. Disposal of any other wastes is prohibited, except waste granted a temporary or one time waiver by the Director.
2. The total permitted area for the Greene County Steam Plant Landfill is approximately 14.95 acres, with all for disposal.
3. The maximum average daily volume of waste disposed at the facility, as contained in the permit application, shall not exceed 5 cubic yards/day. Should the average daily volume exceed this value by 20% or 100 tons/day, whichever is less, for two (2) consecutive quarters the permittee shall be required to modify the permit in accordance with 335-13-5-.06(2)(a)5. The average daily volume shall be computed as specified by 335-13-5-.06(2)(a)5.(i).

- B. Waste Streams. The Permittee may accept for disposal non-hazardous construction and demolition waste such as waste building materials, masonry, wall board, roofing material, wood products, pipe, insulation and similar materials, rubbish such as paper products, cartons, cardboard, pallets, scrap metal, tires and furniture; asbestos containing material; and non-hazardous industrial wastes such as anion/cation resins and non-hazardous sandblast waste, spent desiccant, and off-specification anhydrous sodium carbonate (soda ash).

- C. Service Area. The service area for this landfill, as contained in the permit application, is Greene County Steam Plant located in Forkland, Alabama.

- D. Waste Placement, Compaction, and Cover. All waste shall be confined to an area as small as possible and placed onto an appropriate slope not to exceed 4 to 1 (25%). All waste shall be spread in layers two feet or less in thickness and thoroughly compacted weekly with adequate landfill equipment prior to placing additional layers of waste or placing the monthly cover. A minimum of six inches of compacted earth shall be added at the conclusion of each month of operation, which is defined as the last Friday of each month (See Section VIII., 1.).

- E. Liner Requirements. At this time, the Permittee shall not be required to install a liner system. The base of the liner system shall be a minimum of five (5) feet above the highest measured groundwater level.

- F. Security. The Permittee shall provide artificial and/or natural barriers, which prevent entry of unauthorized vehicular traffic to the facility.

- G. All Weather Access Roads. The Permittee shall provide an all-weather access road to the dumping face that is wide enough to allow passage of collection vehicles.

- H. Adverse Weather Disposal. The Permittee shall provide for disposal activities in adverse weather conditions.

- I. Personnel. The Permittee shall maintain adequate personnel to ensure continued and smooth operation of the facility.

- J. Environmental Monitoring and Treatment Structures. The Permittee shall provide protection and proper maintenance of environmental monitoring and treatment structures.

- K. Vector Control. The Permittee shall provide for vector control as required by ADEM Admin. Code 335-13.

- L. Bulk or Noncontainerized Liquid Waste. The Permittee shall not dispose of bulk or noncontainerized liquid waste, or containers capable of holding liquids, unless the conditions of 335-13-4-.23(1)(j) are met.
- M. Empty Containers. Empty containers larger than 10 gallons in size must be rendered unsuitable for holding liquids prior to disposal in the landfill unless otherwise approved by ADEM.
- N. Other Requirements. ADEM may enhance or reduce any requirements for operating and maintaining the landfill as deemed necessary by the Land Division.
- O. Other Permits. The Permittee shall operate the landfill according to this and any other applicable permits.
- P. Scavenging and Salvaging Operations. The Permittee shall prevent scavenging and salvaging operations, except as part of a controlled recycling effort. Any recycling operation must be in accordance with plans submitted and approved by ADEM.
- Q. Signs. If the landfill is available to the public or commercial haulers, the Permittee shall provide a sign outlining instructions for use of the site. The sign shall be posted and have the information required by 335-13-4-.23(1)(f).
- R. Litter Control. The Permittee shall control litter.
- S. Fire Control. The Permittee shall provide fire control measures.

#### SECTION IV. GROUNDWATER MONITORING REQUIREMENTS.

At this time, groundwater monitoring is not being required. If at any time the Department determines that a groundwater monitoring system is deemed necessary for the protection of human health and the environment, the Permittee must, within 90 days, submit an application for permit modification for the installation of an groundwater monitoring system that meets the proper regulatory requirements of the Alabama Department of Environmental Management

#### SECTION V. GAS MONITORING REQUIREMENTS.

At this time, gas monitoring is not being required (See Section VIII., 2.). If at any time the Department determines that a explosive gas monitoring system is deemed necessary for the protection of human health and the environment, the Permittee must, within 90 days, submit an application for permit modification for the installation of an explosive gas monitoring system that meets the proper regulatory requirements of the Alabama Department of Environmental Management.

#### SECTION VI. SURFACE WATER MANAGEMENT REQUIREMENTS.

The permittee shall construct and maintain run-on and run-off control structures. Any discharges from drainage control structures shall be permitted through a discharge permit issued by the ADEM.

#### SECTION VII. CLOSURE AND POST-CLOSURE REQUIREMENTS.

The Permittee shall close the landfill and perform post-closure care of the landfill in accordance with 335-13.

- A. Final Cover. The Permittee shall grade final soil cover such that surface water does not pond over the permitted area as specified in the Application. The final cover system shall be constructed as specified in the application.

- B. Vegetative Cover. The Permittee shall establish a vegetative or other appropriate cover within 90 days after completion of final grading requirements in the Application. Preparation of a vegetative cover shall include, but not be limited to, the placement of seed, fertilizer, mulch, and water.
- C. Notice of Intent. The Permittee shall place in the operating record and notify ADEM of their intent to close the landfill prior to beginning closure.
- D. Completion of Closure Activities. The Permittee must complete closure activities of each landfill unit in accordance with the Closure Plan within 180 days of the last known receipt of waste.
- E. Certification of Closure. Following closure of each unit, the Permittee must submit to ADEM a certification, signed by an engineer, verifying the closure has been completed according to the Closure Plan.
- F. Post-Closure Care Period. Post-closure care activities shall be conducted after closure of each unit throughout the life of this permit and continuing for a period of thirty (30) years following closure of the facility. ADEM may shorten or extend the post-closure care period applicable to the solid waste disposal facility. The Permittee shall reapply in order to fulfill the post-closure care requirements of this permit.
- G. Post-Closure Maintenance. The Permittee shall provide post closure maintenance of the facility to include regularly scheduled inspections. This shall include maintenance of the cover, vegetation, monitoring devices and pollution control equipment and correction of other deficiencies that may be observed by ADEM. Monitoring requirements shall continue throughout the post closure period as determined by ADEM unless all waste is removed and no unpermitted discharge to waters of the State have occurred.
- H. Post-Closure Use of Property. The Permittee shall ensure that post closure use of the property never be allowed to disturb the integrity of the final cover, liner, or any other component of the containment system. This shall preclude the growing of deep-rooted vegetation on the closed area.
- I. Certification of Post-Closure. Following post-closure of each unit, the Permittee must submit to ADEM a certification, signed by an engineer, verifying the post-closure has been completed according to the Post-Closure Plan.
- J. Notice in Deed to Property. The Permittee shall record a notation onto the land deed containing the property utilized for disposal within 90 days after permit expiration, revocation or when closure requirements are achieved as determined by ADEM as stated in the Application. This notation shall state that the land has been used as a solid waste disposal facility, the name of the Permittee, type of disposal activity, location of the disposal facility and beginning and closure dates of the disposal activity.
- K. Recording Instrument. The Permittee shall submit a certified copy of the recording instrument to ADEM within 120 days after permit expiration, revocation, or as directed by ADEM as described in the Application.
- L. Removal of Waste. If the Permittee, or any other person(s), wishes to remove waste, waste residues, or any liner or contaminated soils, the owner must request and receive prior approval from ADEM.

#### SECTION VIII. VARIANCES.

- 1. The Permittee is granted a variance from Rule 335-13-4-.23(1)(a)1. requiring weekly cover. The Permittee shall be required to cover all exposed waste by the last Friday of each month (See Section III., D.).
- 2. The Permittee is granted a variance from Rule 335-13-4-.16 requiring explosive gas monitoring (See Section V.).
- 3. The Permittee is granted a variance from Rule 335-13-4-.12(2)(f) requiring a 100 foot buffer zone.

Any variance granted by ADEM may be terminated by ADEM whenever ADEM finds, after notice and opportunity for hearing, that the petitioner is in violation of any requirement, condition, schedule, limitation or any other provision of the variance, or that operation under the variance does not meet the minimum requirements established by state and federal laws and regulations or is unreasonably threatening the public health.

# **Permit Renewal Application**



600 North 18<sup>th</sup> Street / 12N-0831  
Birmingham, Alabama 35203  
(205) 257-4150 tel  
(205) 257-4349 fax  
(205) 504-3000 cell  
egrinder@southernco.com

April 27, 2020

Mr. Scott Story, Chief  
Solid Waste Branch  
Land Division  
Alabama Department of Environmental Management  
Post Office Box 301463  
Montgomery, AL 36130-1463

**RE: Green County Steam Plant Landfill – Landfill Permit Renewal  
(Permit 32-02)  
Alabama Power Company  
Greene County Steam Plant  
801 Steam Plant Road  
Forkland, Alabama 36740**

Dear Mr. Story:

Enclosed is the industrial landfill permit renewal application for the Alabama Power Company Greene County Steam Plant Landfill, Permit #32-02. Included in the package are three (3) copies of the completed permit application with required attachments and ADEM receipt indicating electronic payment of the \$8,150.00 industrial landfill permit renewal fee.

Alabama Power Company would like to request that variances granted in the current permit, consisting of a variance from requiring weekly cover, explosive gas monitoring, and 100 foot buffer zone, be granted during the landfill permit renewal for Permit #32-02.

If you have any questions, please contact Ms. Elizabeth Grinder at (205) 257-4150.

Sincerely,

A handwritten signature in cursive script that reads "Mike Godfrey".

Mike Godfrey, Manager  
Environmental Compliance

Attachments

**ATTACHMENT 1**  
**SOLID WASTE APPLICATION**

# SOLID WASTE APPLICATION

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PERMIT APPLICATION  
SOLID WASTE DISPOSAL FACILITY  
ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
(Submit in Triplicate)

1. Facility type: ☐ Municipal Solid Waste Landfill (MSWLF)  
☒ Industrial Landfill (ILF)  
☐ CCR Landfill (CCRLF)  
☐ CCR Surface Impoundment (CCRSI)  
☐ Other (explain) \_\_\_\_\_

2. Facility Name Greene County Steam Plant Landfill, Permit # 32-02

3. Applicant:

Name: Mr. Mike Godfrey

Address:	Mailing Address	Physical Address
	<u>Alabama Power Company</u>	<u>Greene County Steam Plant</u>
	<u>Post Office Box 2641</u>	<u>801 Steam Plant Road</u>
	<u>Birmingham, Alabama 25291</u>	<u>Forkland, Alabama 36740</u>

Telephone: (205) 257-6131

4. Location: (include county highway map or USGS map)

Township	<u>19-North</u>	Range	<u>03-East</u>	<u>32.60699</u>
Section	<u>22</u>	County	<u>Greene</u>	<u>-87.77674</u>

5. Land Owner:

Name: Alabama Power Company

Address: Post Office Box 2641  
Birmingham, Alabama 35291-0830

<sup>2</sup> Telephone: (205) 257-4150

(Attach copy of agreement from landowner if applicable.) Not Applicable



6. Contact Person:

Name Elizabeth Grinder Jason Arledge

Position or Affiliation Environmental Affairs Specialist Compliance Specialist

Address: Post Office Box 2641 Post Office Box 440  
Birmingham, Alabama 35291-0831 Demopolis, Alabama 36732

Telephone: (205) 257-4150 (334) 289-6161

7. Size of Facility: Size of Disposal Area(s):

14.95 Acres 14.95 Acres

8. Identify proposed service area or specific industry that waste will be received from:

The landfill service is limited to waste generated from Alabama Power Company.

9. Proposed maximum average daily volume to be received at landfill (choose one):

Tons/Day 5 Cubic Yards/Day

10. List all waste streams to be accepted at the facility (i.e., household solid waste, wood boiler ash, tires, trees, limbs, stumps, etc.):

**Construction and demolition waste** - includes waste building materials, masonry, wall board, roofing material, wood products, pipe insulation, and similar materials.

**Rubbish** - paper products, cartons, cardboard, pallets, scrap metal, tires, furniture, and similar materials.

**Asbestos** - asbestos containing material.

**Industrial Wastes:**

- **Spent anion/cation resins** - material used in the on-site water treatment plant. This is typically a low volume/frequency waste stream.

- **Sandblasting waste** - each lot of sandblast waste is analyzed for TCLP metals (RCRA-8) to confirm it is non-hazardous prior to disposal.

Solid Waste Permit Application  
Page 3

- **Spent desiccant** – spent desiccant that no longer has the capacity to condition or control the moisture of compressed air.
- **Sodium carbonate (soda ash)** – Off-specification sodium carbonate that no longer meets operational specifications. This is a low volume, low frequency waste.

*Mike Gougeon*

---

SIGNATURE

DATE

**ATTACHMENT 2**

**GREENE COUNTY STEAM PLANT LANDFILL OPERATIONAL PLAN**

**GREENE COUNTY STEAM PLANT  
LANDFILL OPERATIONAL PLAN**

**ADEM PERMIT # 32-02**

## **Greene County Steam Plant Landfill Operational Plan**

### **Landfill Siting**

- Flood Plain

The landfill is not located in an area designated as being within the 100-year floodplain.

- Endangered Species

No known endangered or threatened species of plants, fish or wildlife are affected by the existing landfill.

- Water Resources

Water will naturally flow towards a low lying area following the general slope of the land. The existing landfill will not cause a discharge of dredged material or fill material into waters of the State due to the distance the landfill is from any such waters. The slope of the landfill and the natural topography of the land directs any water away from the river. The landfill is located near the Warrior River, approximately 130 feet from the landfill boundary. The bottom elevation of solid waste will be a minimum of ten feet above the seasonal high groundwater table or bedrock.

- Proximity to Airports

There is no airport runway within 10,000 feet of the existing landfill.

- Site Stability

There are no known zones of active faults, sink holes or karst zones in the area near the landfill.

- Cultural Resources

There is no archaeological or historically sensitive area within the existing landfill boundaries.

- Buffer

A buffer zone is not necessary because the landfill site is located on Alabama Power Company property with no other landowners or public access within 100 feet.

- Groundwater Wells - Source

There are five (5) drinking water wells within close proximity of the landfill site and are located on Attachment A. The closest well provides water to the Plant itself and is located approximately

1,000 feet from the landfill boundary. One additional well is located on plant property and is approximately 6,800 feet from the landfill boundary. Three other wells are privately owned and are found approximately 4400, 6000, and 6400 feet from the landfill boundaries.

## **Geologic Review**

### **Regional Geology**

The Greene County Steam Plant is located in Greene County, Alabama, approximately six (6) miles northeast of the City of Demopolis, Alabama. The landfill is located on plant property owned by Alabama Power Company. The site is located in the Gulf Coastal Plain Province and specifically within the alluvial plain of the Black Warrior River. Sediments of the alluvial plain have covered the Black Prairie district, which projects through this area of the state. The alluvial plain district is characterized by a broad, level plain with relatively little or no relief. The district is underlain by unconsolidated alluvial and terrace deposits. Elevations within a one- (1) mile radius of the site range from 100 to 80 feet above mean sea level (msl). The Black Warrior River is the primary drainage feature in the area. Secondary features typically form dendritic to a modified trellis drainage patterns. Johnson Branch and Backbone Creek are the two- (2) most prominent secondary drainage features in the area. Both creeks discharge to the Black Warrior River. Numerous low-lying swampy areas are located adjacent to the river. Unconsolidated sediments deposited by the Black Warrior River underlie the alluvial plain district in this portion of Alabama. Sediments typically consist of a varied sequence of gravels, sands, silts, and clays. These deposits may reach thicknesses of 80 feet in the regional area but are typically less than 40 feet thick at the site.

### **Site Geology**

The solid waste landfill at Greene County Steam Plant is located in an area underlain by unconsolidated alluvial deposits at the surface. Exploratory drilling at the landfill indicates that the area is covered by twenty-four (24) to thirty-five (35) feet of river alluvium (See Attachment B). The alluvium ranges from clays and silty clays to clayey sands to sands. The alluvial material is underlain by the Mooreville Chalk, which is comprised of a compact, clayey chalk. The

Mooreville reaches thicknesses of 420 feet. The Mooreville is overlain by the Demopolis Chalk, which also outcrops in the vicinity of the site. The site area is underlain by an unconfined surface aquifer formed by the alluvial deposits. Groundwater levels obtained from auger borings drilled at the landfill ranged from 12.6 to 19.7 feet below the ground surface which ranges from approximately elevation 85 (msl) to 87.4 (msl). The groundwater gradient at the landfill flows gently to the southeast where a low swampy area is located. The Eutaw and Tuscaloosa aquifers are also present at the site. Both of these aquifers are confined by the Mooreville Chalk, which acts as an aquitard. As previously stated, the Mooreville is approximately 420 feet thick in the area. Surface run-off from the site flows to the east-southeast, where it enters a low-lying swampy area. No areas were observed where site run-off would directly enter the river. Based on these characteristics and the inert properties of the material to be placed in the landfill, contamination of groundwater should not occur.

### **Plans Required**

APC will maintain a written operating record at the site. The following information will become part of that operating record and will be kept on file at the facility.

These records will be available to ADEM upon request:

- Documentation of inspection and maintenance activities
- Daily volume reports
- Personnel training records
- Waste certifications and disposal approvals for Special Wastes, Industrial Wastes, etc.
- Other pertinent operating, inspection, maintenance, and monitoring information
- Copies of all variances granted by the Department, including copies of all approvals of special operating conditions

APC will submit Quarterly Volume Reports as specified in Rule 335-13-4-.23(16). All records will be retained for a period of at least three (3) years.

## **Groundwater Monitoring**

Due to the inert nature of the material to be disposed and the site geology, groundwater monitoring has not been required.

## **Cover**

- Intermediate Cover

As the frequency and volume of waste placed in the landfill varies greatly, the active face of the landfill will be covered at least monthly (last Friday of the month). A minimum of six inches of compacted earth will be placed on the active part of the active cell as intermediate cover.

## **Explosive Gases – Methane Monitoring**

ADEM granted APC a variance of Section 13-4-.16 relating to methane gas testing on October 29, 1990. This variance was based on the distance of the landfill from adjacent property owners and enclosed structures and the type of waste disposed. (See Attachment 1)

## **Drainage**

There will be no off-site surface drainage passing over the disposal site. This site will not create a storm water discharge point at this time and will be evaluated as the landfill topography changes over the life of the permit.

## **Access**

The landfill is located on APC property that is enclosed within a fence. Signs are posted on the gates entering APC property stating that this is APC property and that all visitors must register with security. Security is present on site 24 hours per day and monitors plant property.



## **Closure**

Closure will be such that surface water does not pond over the disposal facility. A soil cover will be placed on the landfill as each cell is completed and the slope will be graded to less than a 25 % grade but greater than or equal to a 5% grade. The cover will be two feet thick, comprised of 18 inches of earthen material that has a permeability of no greater than  $1 \times 10^{-5} \text{ cm/sec}$  and 6 inches of topsoil. Slopes longer than 25 feet will be terraced to prevent erosion. Each cell will be graded within 30 days after the lift is complete. Vegetative growth will be established within 30 days after the completion of final grading. The vegetative growth will be established either by seeding, using a mixture designed to germinate and mature under the growing conditions at the time of planting. Alternatively, the cover can be established by planting an appropriate variety of grass. The vegetative cover will be maintained as necessary to ensure adequate growth. Maintenance is to include watering and fertilizer to insure proper cover. It is estimated that the total volume remaining in the landfill as proposed is approximately 24,000 cubic yards. The landfill size is approximately 14.95 acres. Closure will be completed within 180 days following the last known receipt of waste. Post closure care will be performed for a minimum of 30 years. Post closure maintenance will include annual inspections and any problems will be corrected in a timely manner. All eroded areas will be filled and reseeded. Cover will be maintained as solid and will not allow ponding. Following completion of the post-closure care period, a certification will be submitted to the Department, signed by an independent registered professional engineer verifying that post-closure care has been completed and a copy will be placed in the operating record.

Post-closure use of the property will never be allowed to disturb the integrity of the final cover and current plans do not include post-closure use of property. Within 90 days after closure or permit expiration, APC will record a notation onto the land deed containing the property utilized for disposal in accordance with regulation 335-13-4-.20(14). APC will submit a certified copy of the recording instrument to the Department within 120 days after permit expiration or as directed by the Department in accordance with regulation 335-14-4-.20(15). Signs will be placed at all boundaries indicating that this area was used as a landfill and that no activity is to be conducted within the landfill boundaries. Any waste that is dumped at the closed landfill will be removed and placed in an approved landfill by the permittee. All access control structures will be maintained

during the post-closure period. Any necessary maintenance will be performed in a timely manner. Vector control shall be conducted to prevent any problems.

## **General Operational Standards**

### Open Burning

No unpermitted open burning is conducted at any APC facility. No open burning will be conducted at the landfill site.

### Acceptable Wastes

Typical wastes that will be accepted at the landfill include construction and demolition waste, rubbish, asbestos, landscaping, and approved industrial wastes

### Prohibited Wastes

No prohibited wastes are placed in the landfill. Routine inspections will be conducted to ensure that no prohibited waste is placed in the landfill.

- Hazardous or PCB Waste

Greene County Steam Plant has a separate program in place for the management of hazardous waste and PCB waste.

- Medical Waste

No regulated medical waste is generated routinely on site. Waste from medical attention/first aid events is handled by the emergency responders or is transferred for treatment and disposal by WestMed.

- Liquid Waste

No liquid or potentially liquid waste streams are placed in the landfill.

- Containers

Containers with a liquid capacity of 10 gallons or more are rendered incapable of holding liquids before being placed in the landfill.

### Service Area

Only waste that is generated by Alabama Power Company will be disposed of in the landfill. No out-of-state waste is accepted.

### Landfill Markers

The landfill boundaries will be identified with a sufficient number of permanent markers which are visible from one marker to the next.

### **Specific Requirements for Landfills**

- Intermediate Compaction and Cover

A minimum of six (6) inches of compacted earth will be placed on the active part of the active cell at the conclusion of each month's operation.

- Cell Closure

Final grading of each cell will be conducted within 60 days after landfilling is complete for that cell. Final earth cover shall be a minimum of two feet of compacted soil (18 inches of clay and 6 inches of topsoil). A two-foot soil cover will be placed on the landfill as each cell is completed and the slope will be graded to less than a 25 % grade but greater than or equal to a 5% grade. Slopes longer than 25 feet will be terraced to prevent erosion. Each cell will be graded within 60 days after landfilling. Vegetative growth will be established within 30 days after the completion of final grading for each completed cell. The vegetative cover will be maintained as necessary to ensure adequate growth. The waste will be dumped at the top of the cell in a confined space and will be layered in 2' or less layers. As the operator daily inspects the active cell, these layers will be thoroughly compacted by the landfill equipment prior to placing any more waste in the cell on an as needed basis. At the conclusion of the month, the waste placed in the active cell will have the monthly cover placed on the cell. Waste will be initially disposed of in Cell #1 by digging a trench and placing the waste on the open face with a slope. After the trench landfilling method has utilized the space in Cell # 1, the waste will be disposed by placing the material on the top and utilizing the area fill method. Asbestos waste is segregated and disposed of in Cell # 2. No material is allowed to be removed once placed in the landfill. Only APC employees are allowed on site therefore no control measures are necessary to insure no material is removed from the landfill. Litter control will be conducted as needed by the landfill operator. A fire brigade crew is on site and available should the need arise. The facility will be operated per the written plant procedure and the guidance given in this permit package. The site is located on APC property that has 24-

hour security surveillance. Disposal can be postponed if weather does not permit the use of the road to the landfill but the road will not be heavily traveled so the condition of the road should remain passable at all times. Since the landfill is infrequently used and no one is stationed at the landfill, personnel facilities are provided at the main plant facility.

## **Special Wastes**

### Asbestos

Asbestos waste will also be generated and disposed of in the plant landfill. The asbestos waste will be primarily disposed of in asbestos cells # 1 and # 3 (D-380546). Once the trench landfilling method has utilized all of the space in asbestos cells labeled # 1, # 2, and # 3 on the drawing, the asbestos material will be placed on the top and utilizing the area fill method in the area designated as Cell 2 on the drawing. The asbestos waste that is generated on site from the ongoing asbestos abatement program is placed into properly labeled, containers and conditioned as to prevent the material from becoming airborne. The containers shall be placed in a specially prepared place and covered with a minimum of 12 inches of cover at the end of each working day that any asbestos is placed in the landfill. Special precautions are taken by all personnel handling the containers to ensure that the bags are not ruptured prior to the placement of the required daily earth cover.

### Sandblast Waste

This waste results from the surface preparation of equipment or structures prior to painting. Each lot of this waste is analyzed for TCLP metals to ensure it is non-hazardous prior to disposal.

### Spent Anion/Cation Resin

Spent anion/cation resins are used in the on-site water treatment plant. The resins are disposed of when they fail to meet operational specifications. This waste stream is a low volume/frequency waste.

#### Off Spec Sodium Carbonate (Soda Ash)

Unused sodium carbonate that fails to meet operational specifications will be disposed of in the landfill. This waste stream is a low volume/frequency waste.

#### Spent Desiccant

Desiccant is used to condition and control moisture of compressed air used in plant control systems. Spent desiccant that no longer has the capacity to condition the compressed air is disposed of in the landfill.

**ATTACHMENT 3**  
**LANDFILL SURVEY**



STATE PLANE

**BOUNDARY DESCRIPTION**

The Greene County Steam Plant Landfill is that certain parcel of land situated in Section 22, Township 19 North, Range 3 East, Greene County, Indiana containing 16.50 Acres more or less and being more particularly described as follows:

Commence at the Southwest corner of Section 22, Township 19 North, Range 3 East, said point being the intersection of the line of said Section 22 with the line of said Township 19 N 174°58' E a distance of 2100.01' to the point; thence N 88°03.0' E 41367.70'; thence run said point of beginning run N 03°48'58" E a distance of 1014.11' to a point; thence S 85°04'0" E a distance of 188.70' to a point; thence S 85°04'0" E a distance of 377.17' to a distance of 429.21' to a point; thence run S 56°54'30" E a distance of 577.17' to a point; thence run S 32°58'0" E a distance of 516.50' to a point; thence run N 69°06'24" E a distance of 245.54' to the point of beginning.

Less and except the following parcel:


Commence at the Southwest corner of Section 22, Township 19 North, Range 3 East, said point being Auburne West Zone State Plane coordinates of Township 19 North, Range 3 East, Section 22, Township 19 North, Range 3 East, Indiana said monument being the point of beginning. From said point of beginning run N 02°48'58" E a distance of 160.02' to a set nail and cap; thence run S 85°49'24" E a distance of 372.30' to a point; thence run S 85°49'24" E a distance of 1250.70' to a found monument; thence run N 69°06'24" E a distance of 245.54' to the point of beginning.

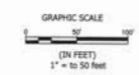
I, the undersigned, Michael T. Hammett, for Alabama Power Company as a Registered Professional Land Surveyor, hereby certify that this map was based upon a survey performed by employees of Southern Company Services, Inc., and is a true and accurate depiction of the lands described herein, and was produced, to the best of my knowledge, in compliance with the Standards of Practice for Land Surveying in the State of Alabama.

Alabama Power Company  
by

*Michael T. Hammett*

Michael T. Hammett  
Alabama Register No. 16161





- | LEGEND |                       |
|--------|-----------------------|
| P.O.B. | POINT OF BEGINNING    |
| P.O.C. | POINT OF COMMENCEMENT |
| C.H.   | CHORD                 |
| •      | SET MONUMENT          |
| o      | FOUND MONUMENT        |
| o      | CALCULATION POINT     |
| ●      | DRILL HOLE            |
| •      | POWER POLE            |
| —      | SECTION LINE AND      |
| ‡      | SECTION LINE          |

NOTES:

- 1) ALL COORDINATES REFER TO ALABAMA WEST ZONE GRID SYSTEM, NAD 27.
- 2) DRAWING IS ACCURATE ONLY AT ORIGINAL SCALE.

COORDINATES IN STATE PLANE GRID  
ALABAMA WEST ZONE NAD 27

Southern Company Services, Inc.

(See the caption)	<b>Alabama Power Company</b>
	JOB GREEN COUNTY STEAM PLANT
	DETAIL LANDFILL PERMIT #32-028

SCALE AS SHOWN		S/V RM	
SHEET 1	OF 1	SHEET	REV
S/PERMISSES		<b>D-380546</b>	<b>2</b>

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DATE	SPR	CHANGED	DESIGNED
APPROVED			DATE
APPROVED			DATE

Drawing name: S:\Workgroups\APC General Service Complex\Civil Tech Support\Survey II\Alabama\Greene Co SP\LANDFILL\Greene County SP Landfill\DWG\LANDFILL\_REV\_9-30-13.dwg May 30, 2013 - 1:07pm

**ATTACHMENT 4**  
**SOLID WASTE PROFILES**



**Alabama Department of Environmental Management**  
**Solid Waste Profile Sheet**  
**Form 300**

**General Information**

Profile Type (check one): ☐ New Certification ☒ Recertification ☐ Modification to Active Profile  
Generator Name: Alabama Power Company - Greene County Steam Plant  
Generator Physical Address: 801 Steam Plant Road, Forkland, Alabama 36740  
Generator County: Greene EPA ID: ALD000615609  
Generator Mailing Address: 600 North 18th Street – 12N-0831, Birmingham, Alabama 35203  
Generator Contact: Elizabeth Grinder Title: Environmental Affairs Specialist  
Phone: 205-257-4150 Email: egrinder@southernco.com

**Submitted by (if different from above):**

Company Name: \_\_\_\_\_ Contact: \_\_\_\_\_  
Mailing Address: \_\_\_\_\_  
Phone: \_\_\_\_\_ Email: \_\_\_\_\_

**Waste Information**

Process Generating Waste: Unused sodium carbonate that no longer meets operational specification (SDS attached)

Waste Name: Sodium Carbonate (Soda Ash) Anhydrous

**If this waste is subject to Corrective Action regulations 40 CFR Part 280 (UST) provide the following information:**

UST Facility ID # \_\_\_\_\_ UST Incident # \_\_\_\_\_

Source of Petroleum Contamination (Gas, Diesel, Used Oil, Hydraulic Oil, ect.): \_\_\_\_\_

Does the waste contain any of the following: ☐ PCBs ☐ Cyanides ☐ Sulfides ☐ Asbestos  
Concentration: \_\_\_\_\_ Units: ☐ mg/L ☐ mg/Kg ☐ PPM ☐ PPB  
Waste Type: ☐ Remediation ☐ Process ☐ CERCLA Cleanup ☒ Other  
Waste Volume: 50 Units: Cu Yd Frequency: ☒ Annual ☐ Quarterly ☐ Monthly

**Waste Properties**

Physical State: ☒ Solid ☐ Liquid ☐ Bladeable Sludge ☐ Solid/Liquid Combination ☐ Other  
% Free Liquids 0% pH (if liquid) N/A Flash Point (if liquid) N/A  
Will liquids be solidified prior to disposal (see instructions)? ☐ YES ☐ NO

**Waste Disposition**

Is this Foundry Waste handled in accordance to ADEM Code 335-13-4-.26(3)? ☐ YES ☒ NO  
Is this Wood Ash handled in accordance to ADEM Code 335-13-4-.26(6)? ☐ YES ☒ NO

Landfill Name #1: Greene County Steam Plant Landfill Permit #: 32-02  
Landfill Name #2: \_\_\_\_\_ Permit #: \_\_\_\_\_  
Landfill Name #3: \_\_\_\_\_ Permit #: \_\_\_\_\_  
Landfill Name #4: \_\_\_\_\_ Permit #: \_\_\_\_\_

Current Profile No. (if applicable) \_\_\_\_\_

Alabama Department of Environmental Management  
Solid Waste Profile Sheet  
Form 300  
Continuation Form

Process Generating Waste continued:

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Other:

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Certification

I certify under penalty of law that this waste material does not contain regulated medical waste, regulated PCB waste, or hazardous waste which is not conditionally exempt from Division 14 Regulations. I further certify that, at the point of disposal, this waste material will not contain any free liquids. This document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Elizabeth Grinder

Name (type or print)



Signature

Environmental Affairs Specialist

Title

04/23/2020

Date



# SAFETY DATA SHEET

Based upon Regulation (EC) No. 1907/2006, as amended by Regulation (EC) No. 453/2010

## sodium carbonate

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifier:

**Product name** : sodium carbonate  
**Synonyms** : carbonic acid disodium salt; carbonic acid sodium salt; CASWELL NO. 752; chrystol carbonate; crystal carbonate (=sodium carbonate); disodium carbonate; natural ash; Na-X; snowlite 1; soda ash; soda, crystals; soda (=sodium carbonate); anhydrous soda; ash; bisodium carbonate; calcined soda(=sodium carbonate); sodium carbonate, anhydrous; sodium carbonate, anhydrous ASTM D458; sodium carbonate, anhydrous GE materials D4D5; sodium carbonate, anhydrous powder; sodium carbonate, crude; sodium carbonate, granular; Solvay soda; synthetic ash; washing soda (= sodiumcarbonate)  
**Registration number REACH** : 01-2119485498-19-0011  
**Product type REACH** : Substance/mono-constituent  
**CAS number** : 497-19-8  
**EC index number** : 011-005-00-2  
**EC number** : 207-838-8  
**RTECS number** : VZ4050000  
**Molecular mass** : 105.99 g/mol  
**Formula** : Na<sub>2</sub>CO<sub>3</sub>

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against:

##### 1.2.1 Relevant identified uses

Chemical raw material  
Glass production: raw material  
Detergent: component  
Acidity regulator  
Paper production: auxiliary substance

##### 1.2.2 Uses advised against

No uses advised against known

#### 1.3 Details of the supplier of the safety data sheet:

##### Supplier of the safety data sheet

OCI Chemical Corporation  
Five Concourse Parkway - Suite 2500  
USA GA 30328-6111 Atlanta

##### Manufacturer of the product

OCI Wyoming L.P.  
254 County Road 4-6  
USA - WY 82935 Green River

#### 1.4 Emergency telephone number:

24h/24h:

CHEMTREC : +1 703 527 38 87

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture:

##### 2.1.1 Classification according to Regulation EC No 1272/2008

Classified as dangerous according to the criteria of Regulation (EC) No 1272/2008

Class	Category	Hazard statements
Eye Irrit.	category 2	H319: Causes serious eye irritation.

##### 2.1.2 Classification according to Directive 67/548/EEC-1999/45/EC

Classified as dangerous in accordance with the criteria of Directives 67/548/EEC and 1999/45/EC

Xi; R36 - Irritating to eyes.



# sodium carbonate

## 2.2 Label elements:

Labelling according to Regulation EC No 1272/2008 (CLP)



Signal word

Warning

H-statements

H319

Causes serious eye irritation.

P-statements

P280

Wear eye protection/face protection.

P264

Wash hands thoroughly after handling.

P305 + P351 + P338

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313

If eye irritation persists: Get medical advice/attention.

## 2.3 Other hazards:

## SECTION 3: Composition/information on ingredients

### 3.1 Substances:

Name (REACH Registration No)	CAS No EC No	Conc. (C)	Classification according to DSD/DPD	Classification according to CLP	Note	Remark
sodium carbonate (01-2119485498-19)	497-19-8 207-838-8	C>99 %	Xi; R36	Eye Irrit. 2; H319	(1)	Mono-constituent

(1) For R-phrases and H-statements in full: see heading 16

### 3.2 Mixtures:

Not applicable

## SECTION 4: First aid measures

### 4.1 Description of first aid measures:

#### General:

Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.

#### After inhalation:

Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

#### After skin contact:

Rinse with water. Soap may be used. Do not apply (chemical) neutralizing agents. Take victim to a doctor if irritation persists.

#### After eye contact:

Rinse immediately with plenty of water. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists.

#### After ingestion:

Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Do not induce vomiting. Consult a doctor/medical service if you feel unwell.

### 4.2 Most important symptoms and effects, both acute and delayed:

#### 4.2.1 Acute symptoms

##### After inhalation:

AFTER INHALATION OF DUST: Dry/sore throat. Coughing. Slight irritation. EXPOSURE TO HIGH CONCENTRATIONS: Irritation of the respiratory tract. Irritation of the nasal mucous membranes. Respiratory difficulties.

##### After skin contact:

Not irritating.

##### After eye contact:

Irritation of the eye tissue. Lacrimation.

##### After ingestion:

AFTER ABSORPTION OF HIGH QUANTITIES: Nausea. Abdominal pain. Irritation of the gastric/intestinal mucosa.

#### 4.2.2 Delayed symptoms

No effects known.

### 4.3 Indication of any immediate medical attention and special treatment needed:

If applicable and available it will be listed below.

Reason for revision: 1.3+1.4

Publication date: 2013-03-13

Date of revision: 2013-08-13

Revision number: 0100

Product number: 10318

2 / 10

# sodium carbonate

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media:

#### 5.1.1 Suitable extinguishing media:

Adapt extinguishing media to the environment.

#### 5.1.2 Unsuitable extinguishing media:

No unsuitable extinguishing media known.

### 5.2 Special hazards arising from the substance or mixture:

Upon combustion: CO and CO<sub>2</sub> are formed. Reacts on exposure to water (moisture) with (some) metals.

### 5.3 Advice for firefighters:

#### 5.3.1 Instructions:

No specific fire-fighting instructions required.

#### 5.3.2 Special protective equipment for fire-fighters:

Gloves. Safety glasses. Protective clothing. Dust cloud production: compressed air/oxygen apparatus. Heat/fire exposure: compressed air/oxygen apparatus.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures:

Prevent dust cloud formation, e.g. by wetting. No naked flames.

#### 6.1.1 Protective equipment for non-emergency personnel

See heading 8.2

#### 6.1.2 Protective equipment for emergency responders

Gloves. Safety glasses. Protective clothing. Dust cloud production: compressed air/oxygen apparatus.

Suitable protective clothing

See heading 8.2

### 6.2 Environmental precautions:

Contain released substance, pump into suitable containers. Plug the leak, cut off the supply. Knock down/dilute dust cloud with water spray. Violent exothermic reaction with (some) acids: release of harmful gases/vapours (carbon dioxide). Carbon dioxide is heavier than air and will collect in ducts, drains and low lying areas.

### 6.3 Methods and material for containment and cleaning up:

Prevent dust cloud formation. Scoop solid spill into closing containers. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.

### 6.4 Reference to other sections:

See heading 13.

## SECTION 7: Handling and storage

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

### 7.1 Precautions for safe handling:

Avoid raising dust. Keep away from naked flames/heat. Observe normal hygiene standards. Keep container tightly closed.

### 7.2 Conditions for safe storage, including any incompatibilities:

#### 7.2.1 Safe storage requirements:

Store in a cool area. Store in a dry area. Keep container in a well-ventilated place. Keep out of direct sunlight. Meet the legal requirements.

#### 7.2.2 Keep away from:

Heat sources, (strong) acids, metals, water/moisture.

#### 7.2.3 Suitable packaging material:

No data available

#### 7.2.4 Non suitable packaging material:

Aluminium, zinc.

### 7.3 Specific end use(s):

If applicable and available, exposure scenarios are attached in annex. See information supplied by the manufacturer.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters:

#### 8.1.1 Occupational exposure

##### a) Occupational exposure limit values

If limit values are applicable and available these will be listed below.



# sodium carbonate

## b) National biological limit values

If limit values are applicable and available these will be listed below.

### 8.1.2 Sampling methods

Product name	Test	Number
No data available		

### 8.1.3 Applicable limit values when using the substance or mixture as intended

If limit values are applicable and available these will be listed below.

### 8.1.4 DNEL/PNEC values

#### DNEL - Workers

sodium carbonate

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term local effects inhalation	10 mg/m <sup>3</sup>	

#### DNEL - General population

sodium carbonate

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Acute local effects inhalation	10 mg/m <sup>3</sup>	

### 8.1.5 Control banding

If applicable and available it will be listed below.

## 8.2 Exposure controls:

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

### 8.2.1 Appropriate engineering controls

Avoid raising dust. Keep away from naked flames/heat. Carry operations in the open/under local exhaust/ventilation or with respiratory protection.

### 8.2.2 Individual protection measures, such as personal protective equipment

Observe normal hygiene standards. Keep container tightly closed. Do not eat, drink or smoke during work.

#### a) Respiratory protection:

Dust production: dust mask with filter type P1.

#### b) Hand protection:

Gloves.

- materials for protective clothing (good resistance)

Butyl rubber, PVC.

#### c) Eye protection:

Safety glasses. In case of dust production: protective goggles.

#### d) Skin protection:

Protective clothing.

### 8.2.3 Environmental exposure controls:

See headings 6.2, 6.3 and 13

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties:

Physical form	Crystalline solid
	Crystalline powder
	Grains
	Lumps
Odour	Odourless
Odour threshold	Not applicable
Colour	Colourless to white
Particle size	694 µm
Explosion limits	Not applicable
Flammability	Non combustible
Log Kow	-6.19 ; Estimated value
Dynamic viscosity	Data not required
Kinematic viscosity	Data not required
Melting point	851 °C
Boiling point	Data not required
Flash point	Not required: exemption according to REACH
Evaporation rate	Not applicable
Vapour pressure	Not required: exemption according to REACH

Reason for revision: 1.3+1.4

Publication date: 2013-03-13

Date of revision: 2013-08-13

Revision number: 0100

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# sodium carbonate

Relative vapour density	Not applicable
Solubility	water ; 212.5 g/l ; 20 °C
Relative density	2.52-253 ; 20 °C
Decomposition temperature	1600 °C
Auto-ignition temperature	>400 °C
Explosive properties	No chemical group associated with explosive properties
Oxidising properties	No chemical group associated with oxidising properties
pH	11.6 ; 5.0 %

## Physical hazards

No physical hazard class

## 9.2 Other information:

Absolute density	2530 kg/m³
------------------	------------

## SECTION 10: Stability and reactivity

### 10.1 Reactivity:

Substance has basic reaction.

### 10.2 Chemical stability:

Hygroscopic.

### 10.3 Possibility of hazardous reactions:

Reacts on exposure to water (moisture) with (some) metals. Violent exothermic reaction with (some) metals. Reacts with (strong) oxidizers.

### 10.4 Conditions to avoid:

Avoid raising dust. Keep away from naked flames/heat.

### 10.5 Incompatible materials:

(strong) acids, metals, water/moisture, aluminium, zinc.

### 10.6 Hazardous decomposition products:

Violent exothermic reaction with (some) acids: release of harmful gases/vapours (carbon dioxide). Upon combustion: CO and CO<sub>2</sub> are formed.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects:

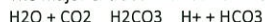
#### 11.1.1 Test results

#### - Toxicokinetics: summary

Toxicokinetics (absorption, metabolism, distribution and elimination)

The toxicokinetics of sodium carbonate are well understood. When sodium carbonate comes into contact with body fluids it will dissociate into carbonate and sodium. The carbonate could potentially increase the pH of the blood.

The major extracellular buffer in the blood and the interstitial fluid of vertebrates is the bicarbonate buffer system, described by the following equation:



Carbon dioxide from the tissues diffuses rapidly into red blood cells, where it is hydrated with water to form carbonic acid. This reaction is accelerated by carbonic anhydrase, an enzyme present in high concentrations in red blood cells. The carbonic acid formed dissociates into bicarbonate and hydrogen ions. Most of the bicarbonate ions diffuse into the plasma. Since the ratio of H<sub>2</sub>CO<sub>3</sub> to dissolved CO<sub>2</sub> is constant at equilibrium, pH may be expressed in terms of bicarbonate ion concentration and partial pressure of CO<sub>2</sub> by means of the Henderson-Hasselbach equation:

$$\text{pH} = \text{pK} + \log \frac{[\text{HCO}_3^-]}{\text{aPCO}_2}$$

The blood plasma of man normally has a pH of 7.40. Should the pH fall below 7.0 or rise above 7.8, irreversible damage may occur. Compensatory mechanisms for acid-base disturbances function to alter the ratio of HCO<sub>3</sub> to PCO<sub>2</sub>, returning the pH of the blood to normal. Thus, metabolic acidosis may be compensated for by hyperventilation and increased renal absorption of HCO<sub>3</sub>. Metabolic alkalosis may be compensated for by hypoventilation and the excess of HCO<sub>3</sub>- in the urine (Johnson and Swanson, 1987). Renal mechanisms are usually sufficient to restore the acid-base balance (McEvoy, 1994). The uptake of sodium, via exposure to sodium carbonate, is much less than the uptake of sodium via food. Therefore, sodium carbonate is not expected to be systemically available in the body. Furthermore it should be realised that an oral uptake of sodium carbonate will result in a neutralisation in the stomach due to the gastric acid.

#### Acute toxicity

##### sodium carbonate

Route of exposure	Parameter	Method	Value	Exposure time	Species	Gender	Value determination
Oral	LD50		2800 mg/kg		Rat	Male/female	Experimental value
Dermal	LD50		>2000 mg/kg		Rabbit		Experimental value
Inhalation	LC50		2.30 mg/l	2 h	Rat	Male	Experimental value

#### Conclusion

Reason for revision: 1.3+1.4

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# sodium carbonate

Low acute toxicity by the oral route  
Low acute toxicity by the dermal route  
Low acute toxicity by the inhalation route

## Corrosion/irritation

### sodium carbonate

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination
Eye	Irritating	EPA 16 CFR 1500.42		1; 2; 3; 4; 7; 10; 14 days	Rabbit	Experimental value
Eye	Highly irritating	Equivalent to OECD 405		1; 24; 48; 72; 168 hours	Rabbit	Experimental value
Dermal	Not irritating	OECD 404		24; 48; 72 hours	Rabbit	Experimental value
Inhalation (aerosol)	Slightly irritating					Literature

### Conclusion

Causes serious eye irritation.  
Not classified as irritating to the skin  
Not classified as irritating to the respiratory system

## Respiratory or skin sensitisation

### sodium carbonate

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Gender	Value determination
Skin							Not determined, exemption according to REACH
Inhalation							Not determined, exemption according to REACH

### Conclusion

Not classified as sensitizing for skin  
Not classified as sensitizing for inhalation

## Specific target organ toxicity

### sodium carbonate

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Gender	Value determination
Oral									No relevant data available
Dermal									No data available
Inhalation									No data available

### Conclusion

Supplementary classification for repeated dose toxicity was not considered necessary

## Mutagenicity (in vitro)

### sodium carbonate

Result	Method	Test substrate	Effect	Value determination
Negative	Other	Escherichia coli		Experimental value
Ambiguous	OECD 471	Bacteria (S.typhimurium)		Read-across

## Mutagenicity (in vivo)

### sodium carbonate

Result	Method	Exposure time	Test substrate	Gender	Organ	Value determination
						No data available

## Carcinogenicity

### sodium carbonate

Route of exposure	Parameter	Method	Value	Exposure time	Species	Gender	Value determination	Organ	Effect
Inhalation							No data available		
Dermal							No data available		
Oral							No data available		

Reason for revision: 1.3+1.4

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Date of revision: 2013-08-13

Revision number: 0100

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# sodium carbonate

## Reproductive toxicity

### sodium carbonate

	Parameter	Method	Value	Exposure time	Species	Gender	Effect	Organ	Value determination
Developmental toxicity	NOAEL	Other	≥ 245 mg/kg		Rat		No effect		Experimental value
Effects on fertility									Not determined, exemption according to REACH

### Conclusion CMR

Not classified for carcinogenicity  
Not classified for mutagenic or genotoxic toxicity  
Not classified for reprotoxic or developmental toxicity

## Toxicity other effects

### sodium carbonate

No (test) data available

## Chronic effects from short and long-term exposure

### sodium carbonate

ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Red skin. Dry skin. Tingling/irritation of the skin. Affection of the nasal septum.

## SECTION 12: Ecological information

### 12.1 Toxicity:

#### sodium carbonate

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	Other	300 mg/l	96 h	Lepomis macrochirus	Static system	Fresh water	Experimental value
Acute toxicity invertebrates	EC50	Other	200 - 227 mg/l	48 h	Ceriodaphnia sp.	Semi-static	Fresh water	Experimental value
Toxicity algae and other aquatic plants	EC50		242 mg/l	5 day(s)	Algae			Experimental value

### Conclusion

Slightly harmful to fishes (LC50(96h) 100-1000 mg/l)  
Practically non-toxic to algae (EC50 >100 mg/l)  
Slightly harmful to invertebrates (EC50 (48h): 100 - 1000 mg/l)  
pH shift  
Not classified as dangerous for the environment according to the criteria of Directive 67/548/EEC  
Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008

### 12.2 Persistence and degradability:

Biodegradability: not applicable

### 12.3 Bioaccumulative potential:

#### sodium carbonate

#### Log Kow

Method	Remark	Value	Temperature	Value determination
		-6.19		Estimated value

### Conclusion

Low potential for bioaccumulation (Log Kow < 4)

### 12.4 Mobility in soil:

Low potential for adsorption in soil

### 12.5 Results of PBT and vPvB assessment:

The criteria of PBT and vPvB as listed in Annex XIII of Regulation (EC) No 1907/2006 do not apply to inorganic substances.

### 12.6 Other adverse effects:

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# sodium carbonate

## sodium carbonate

### Global warming potential (GWP)

Not included in the list of substances which may contribute to the greenhouse effect (Regulation (EC) No 842/2006)

### Ozone-depleting potential (ODP)

Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009)

## SECTION 13: Disposal considerations

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

### 13.1 Waste treatment methods:

#### 13.1.1 Provisions relating to waste

Waste material code (Directive 2008/98/EC, Decision 2000/0532/EC).

16 05 07\* (discarded inorganic chemicals consisting of or containing dangerous substances). Depending on branch of industry and production process, also other waste codes may be applicable. Hazardous waste according to Directive 2008/98/EC.

#### 13.1.2 Disposal methods

Precipitate/make insoluble. Remove to an authorized dump (Class I). Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. May be discharged to wastewater treatment installation. Do not discharge into drains or the environment.

#### 13.1.3 Packaging/Container

Waste material code packaging (Directive 2008/98/EC).

15 01 10\* (packaging containing residues of or contaminated by dangerous substances).

## SECTION 14: Transport information

### Road (ADR)

#### 14.1 UN number:

Transport	Not subject
-----------	-------------

#### 14.2 UN proper shipping name:

#### 14.3 Transport hazard class(es):

Hazard identification number	
Class	
Classification code	

#### 14.4 Packing group:

Packing group	
Labels	

#### 14.5 Environmental hazards:

Environmentally hazardous substance mark	no
--	----

#### 14.6 Special precautions for user:

Special provisions	
Limited quantities	

### Rail (RID)

#### 14.1 UN number:

Transport	Not subject
-----------	-------------

#### 14.2 UN proper shipping name:

#### 14.3 Transport hazard class(es):

Hazard identification number	
Class	
Classification code	

#### 14.4 Packing group:

Packing group	
Labels	

#### 14.5 Environmental hazards:

Environmentally hazardous substance mark	no
--	----

#### 14.6 Special precautions for user:

Special provisions	
Limited quantities	

### Inland waterways (ADN)

#### 14.1 UN number:

Transport	Not subject
-----------	-------------

Reason for revision: 1.3+1.4

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# sodium carbonate

14.2 UN proper shipping name:

14.3 Transport hazard class(es):

Class	
Classification code	

14.4 Packing group:

Packing group	
Labels	

14.5 Environmental hazards:

Environmentally hazardous substance mark	no
--	----

14.6 Special precautions for user:

Special provisions	
Limited quantities	

## Sea (IMDG/IMSBC)

14.1 UN number:

Transport	Not subject
-----------	-------------

14.2 UN proper shipping name:

14.3 Transport hazard class(es):

Class	
-------	--

14.4 Packing group:

Packing group	
Labels	

14.5 Environmental hazards:

Marine pollutant	-
Environmentally hazardous substance mark	no

14.6 Special precautions for user:

Special provisions	
Limited quantities	

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:

Annex II of MARPOL 73/78	
--------------------------	--

## Air (ICAO-TI/IATA-DGR)

14.1 UN number:

Transport	Not subject
-----------	-------------

14.2 UN proper shipping name:

14.3 Transport hazard class(es):

Class	
-------	--

14.4 Packing group:

Packing group	
Labels	

14.5 Environmental hazards:

Environmentally hazardous substance mark	no
--	----

14.6 Special precautions for user:

Special provisions	
Passenger and cargo transport: limited quantities: maximum net quantity per packaging	

## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

#### European legislation:

European drinking water standards

Maximum concentration in drinking water: 200 mg/l (sodium) (Directive 98/83/EC)

Volatile organic compounds (VOC)

Not applicable (inorganic)

#### National legislation The Netherlands

Waste identification (the Netherlands)	LWCA (the Netherlands): KGA category 05
Waterbezwaarlijkheid	11

#### National legislation Germany

TA-Luft	TA-Luft Klasse 5.2.1
WGK	1; Classification water polluting in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 27 July 2005 (Anhang 2)

Reason for revision: 1.3+1.4

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# sodium carbonate

## National legislation France

No data available

## National legislation Belgium

No data available

### 15.2 Chemical safety assessment:

A chemical safety assessment has been performed.

## SECTION 16: Other information

Information based on classification according to CLP

### Labelling according to Directive 67/548/EEC-1999/45/EC (DSD/DPD)

Enumerated in substance list Annex I of Directive 67/548/EEC et sequens

#### Labels



Irritant

#### R-phrases

36 Irritating to eyes

#### S-phrases

(02) (Keep out of the reach of children)

22 Do not breathe dust

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice

#### Full text of any R-phrases referred to under headings 2 and 3:

R36 Irritating to eyes

#### Full text of any H-statements referred to under headings 2 and 3:

H319 Causes serious eye irritation.

(\*) = INTERNAL CLASSIFICATION BY BIG

PBT-substances = persistent, bioaccumulative and toxic substances

DSD Dangerous Substance Directive

DPD Dangerous Preparation Directive

CLP (EU-GHS) Classification, labelling and packaging (Globally Harmonised System in Europe)

The information in this safety data sheet is based on data and samples provided to BIG. The sheet was written to the best of our ability and according to the state of knowledge at that time. The safety data sheet only constitutes a guideline for the safe handling, use, consumption, storage, transport and disposal of the substances/preparations/mixtures mentioned under point 1. New safety data sheets are written from time to time. Only the most recent versions may be used. Old versions must be destroyed. Unless indicated otherwise word for word on the safety data sheet, the information does not apply to substances/preparations/mixtures in purer form, mixed with other substances or in processes. The safety data sheet offers no quality specification for the substances/preparations/mixtures in question. Compliance with the instructions in this safety data sheet does not release the user from the obligation to take all measures dictated by common sense, regulations and recommendations or which are necessary and/or useful based on the real applicable circumstances. BIG does not guarantee the accuracy or exhaustiveness of the information provided and cannot be held liable for any changes by third parties. This safety data sheet is only to be used within the European Union, Switzerland, Iceland, Norway and Liechtenstein. Any use outside of this area is at your own risk. Use of this safety data sheet is subject to the licence and liability limiting conditions as stated in your BIG licence agreement or when this is failing the general conditions of BIG. All intellectual property rights to this sheet are the property of BIG and its distribution and reproduction are limited. Consult the mentioned agreement/conditions for details.

**SAFETY DATA SHEET**  
**Sodium Carbonate, Anhydrous**

SDS #: 497-19-8  
Revision date: 2017-03-09  
Format: NA  
Version 5.03

# TRONOX

## 1. PRODUCT AND COMPANY IDENTIFICATION

### Product Identifier

Product Name Soda Ash

### Other means of identification

Product Code(s) 497-19-8

Synonyms Sodium carbonate, anhydrous; Carbonic acid, disodium salt; Disodium carbonate

Chemical Family Alkali salt

### Recommended use of the chemical and restrictions on use

Recommended Use: Glass manufacture , Personal care, Detergent, Water treatment chemical, Chemical processing

Restrictions on Use: See section 16 for more information

### Manufacturer Address

Tronox Alkali Wyoming Corporation  
1735 Market Street  
Philadelphia, PA 19103  
Tel: +1 877-362-2248 or +1 215-845-4500  
www.tronox.com

### Emergency telephone number

1 307 / 872 2452 (Plant - Green River, WY)  
1 303/ 389-1409 (Medical - U.S. - Call Collect)

For leak, fire, spill or accident emergencies, call:  
1 800 / 424 9300 (CHEMTREC - U.S.A.)  
1 703 / 527 3887 (CHEMTREC - Collect - All Other Countries)

## 2. HAZARDS IDENTIFICATION

### Classification

#### OSHA Regulatory Status

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Serious eye damage/eye irritation

Category 2

# Sodium Carbonate, Anhydrous

SDS #: 497-19-8  
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## GHS Label elements, including precautionary statements

### EMERGENCY OVERVIEW

#### Warning

#### Hazard Statements

H319 - Causes serious eye irritation



#### Precautionary Statements - Prevention

P264 - Wash face, hands and any exposed skin thoroughly after handling

P280 - Wear eye protection/ face protection

#### Precautionary Statements - Response

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P337 + P313 - If eye irritation persists: Get medical advice/ attention

#### Hazards not otherwise classified (HNOC)

No hazards not otherwise classified were identified.

#### Other Information

May be harmful if swallowed.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Family  
Formula

Alkali salt.  
 $\text{Na}_2\text{CO}_3$

Chemical name	CAS-No	Weight %
Sodium carbonate	497-19-8	100

Synonyms are provided in Section 1.

## 4. FIRST AID MEASURES

#### Eye Contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.

#### Skin Contact

Wash off with warm water and soap. Get medical attention if irritation develops and persists. Remove and wash contaminated clothing before re-use.

#### Inhalation

Remove person to fresh air. If signs/symptoms continue, get medical attention.

## Sodium Carbonate, Anhydrous

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Ingestion	Never give anything by mouth to an unconscious person Get medical attention if symptoms occur
Most important symptoms and effects, both acute and delayed	Causes serious eye damage / eye irritation.
Indication of immediate medical attention and special treatment needed, if necessary	Treat symptomatically.

### 5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media	Use extinguishing agent suitable for type of surrounding fire.
Specific Hazards Arising from the Chemical	Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes
Hazardous Combustion Products	Fumes of sodium oxide. Carbon oxides (COx).
<u>Explosion data</u>	
Sensitivity to Mechanical Impact	Not sensitive.
Sensitivity to Static Discharge	Not sensitive.
Protective equipment and precautions for firefighters	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

### 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Avoid dust formation. Sweep up to prevent slipping hazard.
Other	For further clean-up instructions, call Emergency Hotline number listed in Section 1 "Product and Company Identification" above.
Environmental Precautions	Do not flush into surface water or sanitary sewer system.
Methods for Containment	Prevent large quantities of this product from contacting vegetation or waterways. Cover with plastic sheet to prevent spreading. Pick up and transfer to properly labeled containers. Keep in suitable and closed containers for disposal.
Methods for cleaning up	Pick up and transfer to properly labeled containers. Keep in suitable and closed containers for disposal. Dispose of waste as indicated in Section 13.

### 7. HANDLING AND STORAGE

Handling	Use air conveying/mechanical systems for bulk transfer to storage. Provide appropriate exhaust ventilation at places where dust is formed. In case of insufficient ventilation, wear suitable respiratory equipment if release of airborne dust is expected.
Storage	Store in original container. Keep in properly labeled containers. Keep container tightly closed.
Incompatible products	Aluminium. Powdered aluminum. Acids

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Control parameters

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies Local nuisance dust standards apply

## Sodium Carbonate, Anhydrous

SDS #: 497-19-8  
Revision date: 2017-03-09  
Version 5.03

### Appropriate engineering controls

**Engineering measures** Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction.

### Individual protection measures, such as personal protective equipment

**Eye/Face Protection** Tightly fitting safety goggles.

**Skin and Body Protection** Wear suitable protective clothing. Protective shoes or boots.

**Hand Protection** Nitrile rubber, Neoprene gloves

**Respiratory Protection** In case of inadequate ventilation wear respiratory protection.

**Hygiene measures** Handle in accordance with good industrial hygiene and safety practice.

**General information** These recommendations apply to the product as supplied

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

Appearance	Granules
Physical State	Solid
Color	White
Odor	odorless
Odor threshold	Not applicable
pH	11.4 (1% solution in water)
Melting point/freezing point	851 °C
Boiling Point/Range	No information available
Flash point	Not applicable
Evaporation Rate	No information available
Flammability (solid, gas)	Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes
Flammability Limit in Air	
Upper flammability limit:	No information available
Lower flammability limit:	No information available
Vapor pressure	No information available
Vapor density	No information available
Density	No information available
Specific gravity	2.52
Water solubility	212.5 g/L @ 20 °C
Solubility in other solvents	No information available
Partition coefficient	No information available
Autoignition temperature	No information available
Decomposition temperature	400 °C
Viscosity, kinematic	No information available
Viscosity, dynamic	No information available
Explosive properties	Not explosive
Oxidizing properties	Non-oxidizing
Molecular weight	105.99
Bulk density	0.86 - 1.12 g/cm <sup>3</sup> (Dense grades) 0.70 - 0.90 g/cm <sup>3</sup> (Light Grades)
K <sub>st</sub>	0 bar m/s

## 10. STABILITY AND REACTIVITY

**Reactivity** None under normal use conditions.

**Chemical Stability** Stable. Decomposes by reaction with strong acid.



## Sodium Carbonate, Anhydrous

SDS #: 497-19-8  
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Possibility of Hazardous Reactions None under normal processing.

Hazardous polymerization Hazardous polymerization does not occur.

Conditions to avoid Exposure to air or moisture over prolonged periods.

Incompatible materials Aluminium. Powdered aluminum. Acids.

Hazardous Decomposition Products Sodium oxides. Carbon oxides (COx).

### 11. TOXICOLOGICAL INFORMATION

#### Product Information

LD50 Oral 2,800 mg/kg (rat)  
LD50 Dermal > 2,000 mg/kg (rabbit)  
LC50 Inhalation

Eye Contact Irritating to eyes.  
Skin Contact Non-irritating  
Sensitization Patch test on human volunteers did not demonstrate sensitization properties.

#### Information on toxicological effects

Symptoms No information available.

#### Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic toxicity No known effect.  
Mutagenicity No information available  
Carcinogenicity Not recognized as carcinogenic by Research Agencies (IARC, NTP, OSHA, ACGIH).  
Reproductive toxicity No information available.  
STOT - single exposure No information available.  
STOT - repeated exposure No information available.  
Aspiration hazard No information available.

### 12. ECOLOGICAL INFORMATION

#### Ecotoxicity

Sodium carbonate (497-19-8)				
Active Ingredient(s)	Duration	Species	Value	Units
Sodium Carbonate	96 h LC50	Bluegill sunfish	300	mg/L
Sodium Carbonate	48 h EC50	Ceriodaphnia	200-227	mg/L

Persistence and degradability Biodegradability does not pertain to inorganic substances.

Bioaccumulation Does not bioaccumulate.

Mobility Dissociates into ions.

Other Adverse Effects None known.

### 13. DISPOSAL CONSIDERATIONS

## Sodium Carbonate, Anhydrous

SDS #: 497-19-8  
Revision date: 2017-03-09  
Version 5.03

Waste disposal methods This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). Dispose of in accordance with local regulations.

Contaminated Packaging Dispose of in accordance with local regulations.

### 14. TRANSPORT INFORMATION

DOT NOT REGULATED

TDG NOT REGULATED

ICAO/IATA NOT REGULATED

IMDG/IMO NOT REGULATED

### 15. REGULATORY INFORMATION

#### U.S. Federal Regulations

##### SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

##### SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic health hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

##### Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

##### CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

#### US State Regulations

##### California Proposition 65

This product does not contain any Proposition 65 chemicals.

##### U.S. State Right-to-Know Regulations

This product does not contain any substances regulated by state right-to-know regulations

##### International Inventories

Component	TSCA (United States)	DSL (Canada)	EINECS/ELI NCS (Europe)	ENCS (Japan)	China (IECSC)	KECL (Korea)	PICCS (Philippines)	AICS (Australia)
Sodium carbonate 497-19-8 ( 100 )	X	X	X	X	X	X	X	X

# Sodium Carbonate, Anhydrous

SDS #: 497-19-8  
Revision date: 2017-03-09  
Version 5.03

Mexico - Grade

Moderate risk, Grade 2

WHMIS Hazard Class

D2B - Toxic materials, Eye irritation

Class E: Corrosive to aluminum. Not corrosive to animal skin or carbon steel.



D2B - Toxic



E - Corrosive

## 16. OTHER INFORMATION

NFPA	Health Hazards 2	Flammability 0	Instability 0	Special Hazards -
HMIS	Health Hazards 2	Flammability 0	Physical hazard 0	Personal Protection X

NFPA/HMIS Ratings Legend Severe = 4; Serious = 3; Moderate = 2; Slight = 1; Minimal = 0

### Product Certifications

This product meets the chemical testing specifications defined in the Food Chemicals Codex (FCC), 9th Edition, but is not manufactured under cGMP's.

This product is certified to NSF/ANSI Standard 60 for use in drinking water treatment at the specified maximum use limit. The MUL (maximum use level) for sodium carbonate, anhydrous is 150 mg/L under NSF/ANSI Standard 60.



OU Kosher Certification



Halal: IFANCA



American Water Works Association

Revision date:  
Revision note

2017-03-09

Removed inhalation data; Tox review determined the endpoint was not indicative of soda ash toxicity due to NaOH component in test formulation used to generate the data.

### Disclaimer

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Prepared By:

Tronox Limited

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End of Safety Data Sheet

**Alabama Department of Environmental Management  
Solid Waste Profile Sheet  
Form 300**

**General Information**

Profile Type (check one): ☐ New Certification ☒ Recertification ☐ Modification to Active Profile

Generator Name: Alabama Power Company - Greene County Steam Plant

Generator Physical Address: 801 Steam Plant Road, Forkland, Alabama 36740

Generator County: Greene EPA ID: ALD000615609

Generator Mailing Address: 600 North 18th Street - 12N-0831

Generator Contact: Elizabeth Grinder Title: Environmental Affairs Specialist

Phone: 205-257-4150 Email: egrinder@southernco.com

**Submitted by (if different from above):**

Company Name: \_\_\_\_\_ Contact: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

Phone: \_\_\_\_\_ Email: \_\_\_\_\_

**Waste Information**

Process Generating Waste: Routine maintenance of an air dryer system used to condition compressed air for plant control systems.

Comprised of the following: 0-25% silica gel, 0-25% molecular sieve, and 50-100% tabular bed support (Alumina) - MSDS attached

Waste Name: Spent desiccant

**If this waste is subject to Corrective Action regulations 40 CFR Part 280 (UST) provide the following information:**

UST Facility ID # \_\_\_\_\_ UST Incident # \_\_\_\_\_

Source of Petroleum Contamination (Gas, Diesel, Used Oil, Hydraulic Oil, ect.): \_\_\_\_\_

Does the waste contain any of the following: ☐ PCBs ☐ Cyanides ☐ Sulfides ☐ Asbestos

Concentration: \_\_\_\_\_ Units: ☐ mg/L ☐ mg/Kg ☐ PPM ☐ PPB

Waste Type: ☐ Remediation ☐ Process ☐ CERCLA Cleanup ☒ Other

Waste Volume: 100 Units: Cu Yd Frequency: ☒ Annual ☐ Quarterly ☐ Monthly

**Waste Properties**

Physical State: ☒ Solid ☐ Liquid ☐ Bladeable Sludge ☐ Solid/Liquid Combination ☐ Other

% Free Liquids 0% pH (if liquid) N/A Flash Point (if liquid) N/A

Will liquids be solidified prior to disposal (see instructions)? ☐ YES ☐ NO

**Waste Disposition**

Is this Foundry Waste handled in accordance to ADEM Code 335-13-4-.26(3)? ☐ YES ☒ NO

Is this Wood Ash handled in accordance to ADEM Code 335-13-4-.26(6)? ☐ YES ☒ NO

Landfill Name #1: Greene County Steam Plant Landfill Permit #: 32-02

Landfill Name #2: \_\_\_\_\_ Permit #: \_\_\_\_\_

Landfill Name #3: \_\_\_\_\_ Permit #: \_\_\_\_\_

Landfill Name #4: \_\_\_\_\_ Permit #: \_\_\_\_\_

Current Profile No. (if applicable) \_\_\_\_\_

Alabama Department of Environmental Management  
Solid Waste Profile Sheet  
Form 300  
Continuation Form

Process Generating Waste continued:

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Other:

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Certification

I certify under penalty of law that this waste material does not contain regulated medical waste, regulated PCB waste, or hazardous waste which is not conditionally exempt from Division 14 Regulations. I further certify that, at the point of disposal, this waste material will not contain any free liquids. This document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Elizabeth Grinder

Name (type or print)

  
Signature

Environmental Affairs Specialist

Title

04/21/2020

Date

# Material Safety Data Sheet

Revision Date: 05/11/11 Supersedes: 05/14/08

Desiccant: K12, Beaded Silica Gel  
K3, Granular Silica Gel

PRODUCT NAME: Silica Gel



## COMPANY IDENTIFICATION

Suppliers Name: Kemp, an SPX Brand

Emergency  
Telephone No. 352-237-1220

Address: 4647 S.W. 40<sup>th</sup> Avenue  
Ocala, Florida 34474-5799 USA

For Product  
Information 352-237-1220

## 1. PRODUCT IDENTIFICATION

Product Name: Silica Gel – White

## 2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Component</u>	<u>CAS No.</u>	<u>% Weight</u>
Silica Gel (SiO <sub>2</sub> )	7631-86-9	99.0

Hazard Data: Non-hazard

## 3. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: White Granules or Beads

Odor: Odorless

pH: 4 - 8

Boiling Point: Not Available

Melting Point: 1713 +6°C

Water Solubility: Insoluble

Specific Gravity (H<sub>2</sub>O = 1): Not Available

Vapor Pressure (mm Hg): Not Available

Vapor Density (Air = 1): Not Available

Bulk Density (kg/m<sup>3</sup>): 700 – 800g

Evaporation Rate (Butyl Acetate = 1): Not Available

## 4. FIRE FIGHTING MEASURES

Flash Point: Not Available.

Flammable Limits: Non-flammable

LEL: Not Available

UEL: Not Available

Extinguishing Media: Not Available.

Special Fire Fighting Procedures: Not Available.

Unusual Fire and Explosion Hazards: Not Available.

# Material Safety Data Sheet

Revision Date: 05/11/11      Supersedes: 05/14/08

Desiccant: K-12, Beaded Silica Gel  
K-3, Granular Silica Gel

PRODUCT NAME: Silica Gel

---

## 5. STABILITY AND REACTIVITY

---

Stability: Stable.

Conditions to Avoid: Not Available

Hazardous Decomposition Products: Not Available

Hazardous Polymerization: Will not occur.

Hazardous Polymerization (Conditions to Avoid): Not Available

---

## 6. HAZARDS IDENTIFICATION

---

Routes of Exposure:

Inhalation: Not Available.

Skin Absorption: No Hazard.

Skin Contact: No Hazard.

Eye Contact: No Hazard.

Ingestion: Believed to be no hazard.

Signs and Symptoms of Exposure: Not Available

Effects of Overexposure:

Acute Exposure: Not Available

Chronic Exposure: Not Available

Medical Conditions Aggravated by Exposure: Not Available.

Emergency and First Aid Procedures

Eye Contact: Immediately wash from eyes with clean of water while occasionally lifting eyelids. (Do not rub eyes.)

Skin Contact: Wash affected area with soap and plenty of water.

Inhalation: Remove victim to fresh air. Get medical attention for any difficulty with breathing.

Ingestion: Administer plenty of water.

---

## 7. PRECAUTIONS FOR SAFE HANDLING AND USE

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Spill Procedure: Sweep up.

Waste Disposal Method: Comply with local regulations for non-hazardous chemical disposal.

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## 8. SPECIAL PROTECTION AND CONTROL METHODS

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Respiratory Protection: Use a NIOSH approved dust mask when working with powder.

Ventilation: Natural ventilation.

Protective Gloves: Working gloves.

Eye Protection: Safety goggles recommended.

Other Protective Clothing or Equipment: Not Available



# **Material Safety Data Sheet**

Revision Date: 05/11/11      Supersedes: 05/14/08

Desiccant: K-12, Beaded Silica Gel  
K-3, Granular Silica Gel

PRODUCT NAME: Silica Gel

---

## **9. TRANSPORTATION AND SHIPPING REQUIREMENTS**

---

D.O.T. Shipping Name: Not Available

D.O.T. Hazard Classification: Non-Hazardous

D.O.T. Labels Required: None

Hazardous Waste: None

---

## **10. OTHER INFORMATION**

---

MSDS Status: Supersedes 05/14/08



## Quick Identifier

Desiccant: **K12, Beaded Silica Gel**  
**K3, Granular Silica Gel**

# Material Safety Data Sheet

**ATTENTION: Plant Manager/Safety Director:**

This MSDS supersedes all prior data sheets received for this product. We urge you to study it carefully. This is provided with each container as our way of communicating Health, Safety, and Environmental Protection Information to our customers.

This information is provided to ensure safe handling and storage of our products in accordance with OSHA Hazard Communication Standard 29 CFR 1910.1200. The information contained in this MSDS must be passed on to all employees in your firm that handle and/or become involved in the implementation or control of operations involving use of the product. We strongly urge you to forward this MSDS to all parties that have a need to know the information contained herein!



## LEGEND:

ACGIH	American Conference of Government Industrial Hygienists	atm	atmosphere
AICS	Australian Inventory of Chemical Substances	cm	centimeter
CAS	Chemical Abstract Services	g, gm	gram
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	in	inch
CFR	Code of Federal Regulations	kg	kilogram
DOT	Department of Transportation	lb	pound
DSL	Domestic Substances List (Canada)	m	meter
ECOIN	European Core Inventory	mg	milligram
EPA	Environmental Protection Agency	ml, ML	milliliter
IARC	International Agency for Research on Cancer	mm	millimeter
LC <sub>50</sub>	Lethal Concentration (50% kill)	n.o.s.	not otherwise specified
LC <sub>Lo</sub>	Lowest Published Lethal Concentration	ppb	parts per billion
LD <sub>50</sub>	Lethal Dose (50% kill)	ppm	parts per million
LD <sub>Lo</sub>	Lowest Published Lethal Dose	psia	pounds per square inch
NFPA	National Fire Protection Agency	μ, u	micron
NIOSH	National Institute of Occupational Safety and Health	μg	microgram
NTP	National Toxicology Program		
OSHA	Occupational Safety and Health Administration		
PEL	Permissible Exposure Limit		
PIN	Product Identification Number		
RCRA	Resource Conservation and Recovery Act		
SARA	Superfund Amendments and Reauthorization Act		
STEL	Short Term Exposure Limit		
TCLP	Toxic Chemicals Leachate Program		
TDG	Transportation of Dangerous Goods		
TLV	Threshold Limit Value		
TSCA	Toxic Substances Control Act		
TWA	Time Weighted Average		

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# Material Safety Data Sheet

Revision Date: 05/09/11      Supersedes: 05/14/08

Desiccant: K4, Molecular Sieve  
(Type 4A beads)

PRODUCT NAME: Molecular Sieve Type 4A



## COMPANY IDENTIFICATION

Suppliers Name: Kemp, an SPX Brand

Emergency  
Telephone No. 352-237-1220

Address: 4647 S.W. 40<sup>th</sup> Avenue  
Ocala, Florida 34474-5799 USA

For Product  
Information 352-237-1220

## 1. PRODUCT IDENTIFICATION

Product Name: Molecular Sieve Type 4A

## 2. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS No.	% Weight
Silicon Dioxide	7631-86-9	< 50
Aluminum Oxide	1344-28-1	< 30
Sodium Oxide	1313-59-3	< 30
Magnesium Oxide	1309-48-4	< 5

## 3. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Light Tan Beads or Powder
Odor:	None
Boiling Point/Range:	Not Applicable
Melting Point/Range:	Not Applicable
Water Solubility:	Insoluble
Specific Gravity:	2.10
Vapor Pressure (mm Hg):	Not Applicable
Vapor Density (Air = 1):	Not Applicable
Bulk Density (kg/m <sup>3</sup> ):	Not Applicable
Evaporation Rate (Butyl Acetate = 1):	Not Applicable

## 4. FIRE FIGHTING MEASURES

Flash Point: Not applicable.

Flammable Limits: Non-flammable

LEL: Not Applicable

UEL: Not Applicable

Suitable Extinguishing Media: Use extinguishing media appropriate for surrounding fire.

Fire and Explosion Hazards: Contact with moisture may generate sufficient heat to ignite combustible materials. Used product may contain retained material of a hazardous nature. Identify that material and inform the fire fighters.

# Material Safety Data Sheet

Revision Date: 05/09/11      Supersedes: 05/14/08

Desiccant: K4, Molecular Sieve  
(Type 4A beads)

PRODUCT NAME: Molecular Sieve Type 4A

---

## 5. HAZARDS IDENTIFICATION

---

### Emergency Overview

Caution - may cause irritation - Skin and eye irritant.

Health Rating - 0 - None

Flammability Rating - 0 - None

Reactivity Rating - 0 - None

Contact Rating - 1 - Slight

Storage Color Code - Orange (General Storage)

### Potential Health Effects

Primary Routes of Exposure: Contact with skin and eyes. Exposure may also occur via inhalation or ingestion if product dust is generated.

Skin Contact: May cause skin irritation. The product gets hot as it first adsorbs water.

Eye Contact: Dust and/or product may cause eye discomfort and/or irritation seen as tearing and reddening

Ingestion: Not applicable.

Inhalation: Exposure to dust particles generated from this material may cause irritation of the respiratory tract.

Signs and Symptoms of Exposure: Not Applicable

### Effects of Overexposure:

Acute Exposure: Not Applicable

Chronic Exposure: Not Applicable

Aggravation of Pre-Existing Conditions: No information found.

Medical Conditions Aggravated by Exposure: Breathing of dust may aggravate asthma

### Emergency and First Aid Procedures

Eye Contact: Flush immediately with plenty of water for at least 15 minutes. If eye irritation persists, consult a physician.

Skin Contact: Wash affected area with soap and plenty of water. If skin irritation persists, call a physician.

Inhalation: Remove victim into fresh air. If symptoms persist, call a physician.

Ingestion: Administer plenty of water. Obtain medical attention.

General Recommendations: Avoid breathing dust and direct contact with skin

---

## 6. STABILITY AND REACTIVITY

---

Stability: Stable under ordinary conditions.

Hazardous Decomposition Products: Not Applicable

Hazardous Polymerization: Will not occur.

Hazardous Polymerization (Conditions To Avoid): Moisture

---

## 7. PRECAUTIONS FOR SAFE HANDLING AND USE

---

Handling: Keep container tightly closed. Suitable for general chemical storage area. Containers of this material may become hazardous since they retain product residues, dusts, solids, observe all warnings and precautions listed for the product.

Accidental Release Procedure: Wear protective clothing, sweep up and remove.

Waste Disposal Method: Comply with local regulations for non-hazardous chemical disposal.

---

## 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

---

Respiratory Protection: Use a NIOSH approved dust mask when working with powder.

Ventilation: Dilution ventilation is a satisfactory health hazard control for this substance.

Skin Protection: Wear protective gloves

Eye Protection: Safety goggles recommended

Airborne Exposure Limits: None Established.

Other Protective Clothing or Equipment: Not Applicable

# Material Safety Data Sheet

Revision Date: 05/09/11      Supersedes: 05/14/08

Desiccant: K4, Molecular Sieve  
(Type 4A beads)

PRODUCT NAME: Molecular Sieve Type 4A

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## 9. TOXICOLOGICAL INFORMATION

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### Acute Toxicity

LD50 - Oral:	No information available
LS50 - Skin:	No information available
LD50 - Inhalation:	No information available
Irritation (Skin/Eyes):	No information available

### Chronic Toxicity:

Acute eye, skin, and respiratory tract irritation

### Chronic Inhalation:

The drying action of this product can cause irritation of the mucous membranes of the nose and throat. Avoid prolonged breathing of dust.

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## 10. ECOTOXOLOGICAL INFORMATION

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LC50 Fish:	No information available
LC50 - Daphnia:	No information available

---

## 11. TRANSPORT INFORMATION

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D.O.T. Shipping Name: Not Applicable  
D.O.T. Hazard Classification: Non-Hazardous  
D.O.T. Labels Required: None  
Hazardous Waste: None

---

## 12. DISPOSAL CONSIDERATIONS

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Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use, or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal regulations. Dispose of container and unused contents in accordance with local, state, and federal regulations

---

## 13. OTHER INFORMATION

---

MSDS Status: Supersedes 05/14/08.

# Quick Identifier

Desiccant: K4, Molecular Sieve  
(Type 4A beads)

## Material Safety Data Sheet

ATTENTION: Plant Manager/Safety Director:

This MSDS supersedes all prior data sheets received for this product. We urge you to study it carefully. This is provided with each container as our way of communicating Health, Safety, and Environmental Protection Information to our customers.

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### LEGEND:

ACGIH	American Conference of Government Industrial Hygienists	atm	atmosphere
AICS	Australian Inventory of Chemical Substances	cm	centimeter
CAS	Chemical Abstract Services	g, gm	gram
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	in	inch
CFR	Code of Federal Regulations	kg	kilogram
DOT	Department of Transportation	lb	pound
DSL	Domestic Substances List (Canada)	m	meter
ECODN	European Core Inventory	mg	milligram
EPA	Environmental Protection Agency	ml, ML	milliliter
IARC	International Agency for Research on Cancer	mm	millimeter
LC <sub>50</sub>	Lethal Concentration (50% kill)	n.o.s.	not otherwise specified
LC <sub>10</sub>	Lowest Published Lethal Concentration	ppb	parts per billion
LD <sub>50</sub>	Lethal Dose (50% kill)	ppm	parts per million
LD <sub>10</sub>	Lowest Published Lethal Dose	psia	pounds per square inch
NFPA	National Fire Protection Agency	μ, u	micron
NIOSH	National Institute of Occupational Safety and Health	μg	microgram
NTP	National Toxicology Program		
OSHA	Occupational Safety and Health Administration		
PEL	Permissible Exposure Limit		
PIN	Product Identification Number		
RCRA	Resource Conservation and Recovery Act		
SARA	Superfund Amendments and Reauthorization Act		
STEL	Short Term Exposure Limit		
TCLP	Toxic Chemicals Leachate Program		
TDG	Transportation of Dangerous Goods		
TLV	Threshold Limit Value		
TSCA	Toxic Substances Control Act		
TWA	Time Weighted Average		

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# Material Safety Data Sheet

Revision Date: 05/09/11 Supersedes: 05/14/08

PRODUCT NAME: Tabular Bed Support

Desiccant: TABULAR SUPPORT  
TS-4 (1/8" Dia.), TS-25 (1/4" Dia.),  
TS-38 (3/8" Dia.), TS-50 (1/2" Dia.)  
TS-100 (1" Dia.)

## COMPANY IDENTIFICATION

SUPPLIERS NAME: SPX Flow Technology  
  
ADDRESS: 4647 S.W. 40<sup>th</sup> Avenue  
Ocala, Florida 34474-5799 USA

EMERGENCY  
TELEPHONE No. 352-237-1220  
  
FOR PRODUCT  
INFORMATION 352-237-1220

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Tabular Bed Support  
Chemical Name: Chemical Stoneware  
Chemical Family: Alumina Silicate

## 2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>COMPONENT</u>	<u>CAS NO.</u>	<u>%</u>	<u>OSHA/PEL</u>	<u>ACGIH/TLV</u>
Aluminum oxide	1344-28-1	40	Not available	Not available
Silicon Dioxide	7631-86-9	60	Not available	Not available

## 3. HAZARDS IDENTIFICATION

The health effects noted below are consistent with requirements under the OSHA Hazard Communication Standard (29CFR 1910.1200)

### Potential Health Effects

**Eye Contact:** This product may be mildly irritating to the eyes.

**Skin Contact:** This product is non-irritating to the skin.

**Inhalation:** Dust may cause irritation to respiratory tract if inhaled. Long term exposure (10-25 years) to dust may cause cough, chest pains, dyspnea, decreased vital capacity and diminished chest expansion. Treat as a nuisance dust.

**Ingestion:** This product is generally considered to have a low order of acute oral toxicity.

**Signs and Symptoms:** Irritation as noted above.

## 4. FIRST AID MEASURES

Eye Contact: N/A

Skin Contact: N/A

Inhalation: N/A

Ingestion: N/A

## 5. FIRE FIGHTING MEASURES

Flash Point Method: Will not burn (see below)

Flammable Limits/% Volume in Air

Lower: Not applicable Upper: Not applicable

Extinguishing Media: Will not burn. Use an extinguishing media appropriate for the surrounding fire.

Special Fire Fighting Procedures and Precautions: Will not burn.

# Material Safety Data Sheet

Revision Date: 05/09/11      Supersedes: 05/14/08

PRODUCT NAME:    Tabular Bed Support

Desiccant:    TABULAR SUPPORT  
TS-4 (1/8" Dia.), TS-25 (1/4" Dia.),  
TS-38 (3/8" Dia.), TS-50 (1/2" Dia.)  
TS-100 (1" Dia.)

---

## 6. SPECIAL PRECAUTIONS

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Stack securely and keep contents dry prior to use.

---

## 7. EXPOSURE CONTROLS / PERSONAL PROTECTION

---

**Respiratory Protection:** NIOSH-approved dust respirator where exposure limit is or may be exceeded.

**Protective Clothing:** Wear gloves to protect against bruising. Eye protection recommended in case of material splintering during handling.

---

## 8. PHYSICAL AND CHEMICAL PROPERTIES

---

Appearance and Odor:	Buff colored solid — odorless.
Boiling Point:	Approximately 4000°F
Melting Point:	Approximately 3700°F
Vapor Pressure (mm Hg):	Not significant.
Vapor Density (air=1):	Not applicable.
Solubility in Water:	Negligible.
Specific Gravity (H <sub>2</sub> O=1):	Not applicable
Evaporation Rate (n-butyl acetate = 1):	Not significant.
Bulk Density:	2.4 G/CC

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## 9. STABILITY AND REACTIVITY

---

**Chemical Stability:** Stable.

**Conditions to Avoid:** None known.

**Incompatibility:** None known.

**Hazardous Decomposition Products:** Not applicable.

**Hazardous Polymerization:** Will not occur.

**Conditions to Avoid:** None known.

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## 10. TOXICOLOGICAL INFORMATION

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No LD<sub>50</sub> or LC<sub>50</sub> found for oral, dermal, or inhalation routes of administration.

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## 11. ENVIRONMENTAL PROTECTION

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The material is inert itself. It will not of itself contaminate other equipment

If the product is used by the customer with chemicals further handling and treatment should be based upon that exposure.

---

## 12. DISPOSAL CONSIDERATIONS

---

Dispose of unused desiccant in accordance with Federal, State, and Local Regulations.

# Material Safety Data Sheet

Revision Date: 05/09/11 Supersedes: 05/14/08

PRODUCT NAME: Tabular Bed Support

Desiccant: TABULAR SUPPORT  
TS-4 (1/8" Dia.), TS-25 (1/4" Dia.),  
TS-38 (3/8" Dia.), TS-50 (1/2" Dia.)  
TS-100 (1" Dia.)

## 13. TRANSPORTATION REQUIREMENTS

Department of Transportation Classification: Not hazardous by DOT Regulations.

## 14. REGULATORY INFORMATION

The components of this product are listed on the EPA/TSCA inventory of chemical substances.

### SARA Title III Information:

NO.	EHS RQ (lbs) (*1)	EHS TPQ (lbs) (*2)	311/312 Category (*3)	Section 313 (*4)
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Aluminum Oxide: None

\*1 Reportable Quantity - of extremely hazardous substance under Section 302.

\*2 Threshold Planning Quantity - of extremely hazardous substance under Section 302.

\*3 Hazard Category - for Section 311/312 Reporting

Health: H-1 = Immediate (acute) Health Hazard; H-2 = Delayed (chronic) Health Hazard

Physical: P-3 = Fire Hazard; P-4 = Sudden release of Pressure Hazard; P-5 = Reactive Hazard

\*4 Toxic Chemical: Under Section 313, category as required under Section 313 (40 CFR 372.42)

## 15. OTHER INFORMATION

MSDS Status: Supersedes 05/14/08

Originated: 03/20/02

Product Use: Support Media

HMIS™ - Hazardous Materials Identification System

HMIS™  
Ratings:

Health	0
Flammability	0
Reactivity	0

0 - minimal hazard; 1 - slight hazard; 2 - moderate hazard; 3 - serious hazard; 4 - severe hazard



## Quick Identifier

### Desiccant: TABULAR SUPPORT

TS-4 (1/8" Dia.), TS-25 (1/4" Dia.),  
TS-38 (1/8" Dia.), TS-50 (1/2" Dia.)  
TS-100 (1" Dia.)

## Material Safety Data Sheet

### ATTENTION: Plant Manager/Safety Director:

This MSDS supersedes all prior data sheets received for this product. We urge you to study it carefully. This is provided with each container as our way of communicating Health, Safety, and Environmental Protection Information to our customers.

This information is provided to ensure safe handling and storage of our products in accordance with OSHA Hazard Communication Standard 29 CFR 1910.1200. The information contained in this MSDS must be passed on to all employees in your firm that handle and/or become involved in the implementation or control of operations involving use of the product. We strongly urge you to forward this MSDS to all parties that have a need to know the information contained herein!

### LEGEND:

ACGIH	American Conference of Government Industrial Hygienists	atm	atmosphere
AICS	Australian Inventory of Chemical Substances	cm	centimeter
CAS	Chemical Abstract Services	g, gm	gram
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	in	inch
CFR	Code of Federal Regulations	kg	kilogram
DOT	Department of Transportation	lb	pound
DSL	Domestic Substances List (Canada)	m	meter
ECOIN	European Core Inventory	mg	milligram
EPA	Environmental Protection Agency	ml, ML	milliliter
IARC	International Agency for Research on Cancer	mm	millimeter
LC <sub>50</sub>	Lethal Concentration (50% kill)	n.o.s.	not otherwise specified
LC <sub>Lo</sub>	Lowest Published Lethal Concentration	ppb	parts per billion
LD <sub>50</sub>	Lethal Dose (50% kill)	ppm	parts per million
LD <sub>Lo</sub>	Lowest Published Lethal Dose	psia	pounds per square inch
NFPA	National Fire Protection Agency	μ, u	micron
NIOSH	National Institute of Occupational Safety and Health	μg	microgram
NTP	National Toxicology Program		
OSHA	Occupational Safety and Health Administration		
PEL	Permissible Exposure Limit		
PIN	Product Identification Number		
RCRA	Resource Conservation and Recovery Act		
SARA	Superfund Amendments and Reauthorization Act		
STEL	Short Term Exposure Limit		
TCLP	Toxic Chemicals Leachate Program		
TDG	Transportation of Dangerous Goods		
TLV	Threshold Limit Value		
TSCA	Toxic Substances Control Act		
TWA	Time Weighted Average		

The information contained herein is based upon data considered true and accurate. However, the supplier makes no warranties (express or implied) as to the accuracy or adequacy of the information contained herein or the results to be obtained from the use thereof. This information is offered solely for the user's consideration, investigation and verification. Since the use and conditions of use of this information and the material described herein are not within the supplier's control, the supplier assumes no responsibility for injury to the user or third persons. The material described herein is sold only pursuant to the supplier's Terms and Conditions of Sale, including those limiting warranties and remedies contained therein. It is the responsibility of the user to determine whether any use of this data and information is in accordance with applicable Federal, State or Local Laws and Regulations.

**ATTACHMENT 5**

**ADEM LANDFILL PERMIT RENEWAL FEE RECEIPT**

ALABAMA  
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT



(334) 271-7700 1400 Coliseum Blvd. Montgomery, AL 36110  
mailing address: Post Office Box 301463, Montgomery, AL 36130-1463

**Receipt Confirmation Page**

**ADEM requires that when you pay online, you MUST print out the confirmation information and submit it as proof of payment with your permit application or any other correspondence requiring proof of payment.**

Payment Summary	
Payment Item	Fee
Online Payment - 04/30/2020 13:08:15	\$8,150.00
Total Fee through Alabama.gov ( <a href="#">more info</a> )	\$8,394.50

**Receipt Confirmation Number: 20200430000012904**

**General Invoice Information**

Choose the type of payment you are making: 5359-LAND- SOLID WASTE LANDFILL PERMIT

Description of Other Fees:

Additional Information/Fee Description: Greene County Steam Plant Permit 32-02 Solid Waste Landfill Permit Renewal Fee

Number on your ADEM invoice:

Date on your ADEM invoice:

**Contact Information**

Company/Facility or Individual Name: Alabama Power Company

Facility Permit Number (if applicable): 32-02

Company or Facility Phone: 205-257-4150

Contact Person: Elizabeth Grinder

Contact Phone: 205-257-4150

Contact email address: [egrinder@southernco.com](mailto:egrinder@southernco.com)

Name of an ADEM Program Staff Member (if known): Devin Jenkins

Policy Related Questions: 334-271-7700

Application Support: 866-353-3468 or [support@alabamainteractive.org](mailto:support@alabamainteractive.org)

Version 2.0.0

**LANDFILL REVIEW FORM**  
**ALABAMA POWER COMPANY GREENE STEAM PLANT LANDFILL**  
**GREENE COUNTY**  
**PERMIT # 32-02**  
**PERMIT RENEWAL**

	INITIALS	DATE/COMMENT
John Sturdivant, SWES	_____	_____
Complete application		__4/30/20__
Variances requested		__4/30/20__
Waste screening procedures		_ In_APP _
Environmental justice screening (1mi./5mi.)		_8/12/20__
Financial Assurance updated (MSW only)		__N/A__
Hydrogeologist Memo (Renewal)		__N/A__
Site visit documented		_1/15/2021__

Spec	Date	Document Title	Page
GW Monitoring	N/A		
Gas Monitoring	N/A		
Buffer Zone	N/A (Variance)		
Sed Ponds	N/A (Ash Pond NPDES)		
Disposal Area	4/30/20	Permit Application	Attachment 3
Facility Boundary	4/30/20	Permit Application	Attachment 3

Nicole Shaw, C&ES	_____	_____
Comments:		
Jared Kelly Chief SWES	_____	_____
Scott Story, Chief SWES	_____	_____